

449 0

File: 17G  
P.W.



**NAVAL AIR STATION  
FORT WORTH JRB  
CARSWELL FIELD  
TEXAS**

---

**ADMINISTRATIVE RECORD  
COVER SHEET**

AR File Number 449



## Meeting Notice

**Carswell/Plant 4 Restoration Advisory Board**

**February 11, 1999**

**7:00-9:00 pm**

**NAS Ft. Worth Joint Reserve Base**

**New Commanders Conference Room, Bldg. 1510**

*It is important for all RAB members to attend the February meeting to nominate & elect a community cochair.*

## Agenda

Welcome/Introductions/Minutes

Nomination & Election of Community Cochair

Westworth Village Redevelopment Authority

Carswell Off-Base/Rafael Vazquez

Program Update

Property Transfer Update

Carswell On-Base/ Joe Dunkle

FY00 IRP Program

Fieldwork Update

Air Force Plant 4/John Doepper

USGS Groundwater Model

Public Health Assessment Update

Community Outreach Activities

Open Discussion/Questions

Enclosures:

Draft November 1998 meeting minutes

For more information, please contact:

Mike Dodyk 1-817-732-9734

Daniel Johnson 1-800-982-7248, ext. 346

*Please Note: You will need identification to enter the base. If you wish to drive and park on-base, auto registration and proof of insurance will also be needed.*

**Carswell/Air Force plant No. 4  
Restoration Advisory Board Meeting**

**DRAFT Summary Minutes of 05 November 1998  
Regular Quarterly Meeting**

A regular meeting of the Carswell/Air Force Plant 4 Restoration Advisory Board was held on 05 November, 1998 at the new Commander's Conference Room, Bldg. 1510 at Naval Air Station Fort Worth, Joint Reserve Base. The RAB meeting began at 7:00 p.m.

**Agenda**

Welcome/Introductions/Minutes  
Carswell Off-Base/Rafael Vasquez  
    Program Update  
    Property Transfer Update  
Westworth Village Redevelopment Authority  
    Update/Leland Clemons  
Carswell On-Base/Joe Dunkle  
    AOC-2 Briefing  
    Landfill Fieldwork Briefing  
    Air Force Budget Process (Roger Wilkerson, AFCEE/ERD)  
Air Force Plant 4/John Doepper  
    Program Update  
Next Meeting Agenda  
Open Discussion/Questions

**Welcome and Introduction of Attendees**

Community Chair Mike Gross welcomed everyone to the meeting and introductions were made. Captain McDonald introduced Mr. Wayne McKenzie as the new Navy Environmental Manager. Mike Gross motioned that the minutes from the previous RAB meeting be accepted and this was seconded and approved.

**Minutes**

Comments to the draft minutes should be sent to:

Mr. Brad Nielsen  
HydroGeoLogic, Inc.  
13740 Research Blvd., Unit N-5  
Austin, Texas 78750  
512.336.1170 Phone  
512.336.0178 Fax  
bnielsen@hgl.com E-mail

## Carswell Off-Base

Mr. Rafael Vasquez conducted the Carswell Off-Site briefing.

### Program Update

Mr. Vasquez presented slides on the program status update for closure reports and the closure activities for the weapons storage area, the Sanitary Sewer System Investigation, and the Landfills Investigation (Attachment 1). Additional work associated with the closure reports at the Aerospace Museum, Golf Course Maintenance Yard, Grounds Maintenance Yard, and the Unnamed Stream will be done. Work plans are being prepared for the additional sampling and will be submitted to the regulators within the next month. After the completion of the field investigation the closure reports will be prepared. The expected completion of the closure reports is the spring of 1999.

At the weapons storage area, a contractor is currently remediating contaminated soil by excavation. The contractor is also preparing a work plan to do additional soil removal, which was determined necessary by the contractor during initial excavation activities. The work plan will be reviewed by the regulators, and completion is expected by end of November 1998. Closure is expected by spring of 1999. Afterwards, the land will be offered for public sale.

The Sanitary Sewer System Investigation report has been completed and reviewed by the regulators. Based on comments by the regulators, additional sampling will be required. A work plan is currently being prepared for the sampling. AFBCA is working to obtain funding for sampling to be conducted during the spring of 1999. A closure report is expected to be completed by the summer of 1999 for transfer of the unit to the Navy.

The analytical results are available for investigation at Landfills 4, 5, and 8 and Waste Burial Area 7. AFBCA is currently trying to obtain additional funding to complete the RFI. The corrective action for the units will likely be some sort of cap to cover the landfills. Construction of the caps is scheduled to begin in the summer of 1999 and be completed by the spring of 2000. At that point the long term monitoring for the landfill sites will be transferred to Mr. Dunkle.

### Property Transfer Update

Transfer of the house and the horse stable areas to Westworth Village Redevelopment Authority should happen by January 1999. Transfer of the Federal Bureau of Prisons land will happen by March 1999.

Mr. Doepper asked if Mr. Vasquez had received any Fiscal Year 1999 funding yet. Mr. Vasquez responded by saying that they have not received additional funding at this time; however, work currently being conducted has already been funded.

### Westworth Village Redevelopment Authority

Mr. Leland Clemons conducted the briefing on the activities and progress of the Westworth Village Redevelopment Authority.

Mr. Clemons stated that the Authority will now take over responsibility for the house removal project effective on November 6, 1998 to accelerate removal of the homes. Management of the golf course has changed, and the Authority will begin taking a more hands-on approach for the management of the course.

Mike Gross asked if there was a time frame for the removal of all the homes. Mr. Clemons indicated that receipt of a recent grant requires the project to be completed within a given timetable; therefore, complete removal will be finished by May 1999.

Mr. Doepper inquired if there were any major redevelopment plans for the area. Mr. Clemons responded by saying that they did have major plans. They anticipate the area along Route 183 to be developed as retail shops. The golf course will be reconfigured to open space for some higher-end homes and new for businesses. The golf course clubhouse is currently undergoing renovations.

### Carswell On-Base

Mr. Mike Dodyk presented the update for the restoration program of Carswell On-Base activities.

#### AOC 2 TCE Groundwater Investigation

Mr. Dodyk presented an overview of the AOC-2 TCE groundwater investigation, including a brief overview of the site and the RFI objectives. The investigation for this RFI concentrated on the northern lobe of the TCE plume. The field work for the RFI is complete, and a draft RFI report has been prepared. The purpose of the RFI was to delineate the nature and extent of the plume and to determine the source of the TCE contamination.

Mr. Gross asked which laboratory was being used for the RFI activities. Mr. Dunkle said that the laboratory being used was Quanterra in Alabama. Mr. Gross then inquired whether the 16 proposed monitoring wells had been installed. Mr. Dunkle responded that they had been installed and are functional.

Mr. Dodyk continued with the conclusions on the nature and extent of the AOC-2 plume. He stated that the plume has not moved significantly since the previous study. Next, Mr. Dodyk presented a brief discussion on the natural attenuation of the TCE. Natural attenuation is occurring; however, he stated that the plume was moving faster than the natural attenuation was retarding it.

Mr. Dunkle stated that AFCEE will petition the State to remove AOC-2 from the permit because it was evident that the source of the TCE is Air Force Plant 4. Mr. Vasquez added that the northern and southern groundwater lobes will be treated as one plume. Mr. Doepper

stated that the main concerns are to prevent the northern lobe of the plume from migrating to the Trinity River and to reduce the contamination in the southern lobe of the plume to levels where the property can be transferred.

### RCRA Landfill Investigation

Mr. Dodyk presented a briefing with slides on the RCRA Landfills Investigation conducted by HydroGeoLogic, Inc. (Attachment 2). A brief explanation was given on the goals of the investigation. The investigation was designed to determine the extent of the landfills, and evaluating if a release of hazardous constituents to the environment resulting from activities conducted at each unit. A brief description on the investigation and the findings was given for Landfills 2, 3, 6, 7, 9, and 10.

The boundaries were defined for Landfill 7. Soil samples were collected, and two rounds of groundwater sampling were conducted.

The investigation of Landfill 3 determined that the extent of the landfill was much different from previously expected. The boundary appears to extend beneath the runway from the west to the east. Previously it was thought that the landfill was only on the west side of the active runway. Mr. Dunkle added that prior to the installation of soil borings, geophysical surveys were conducted at each landfill to determine the presence of any anomalies that might indicate landfill material.

Soil samples were collected from several borings at Landfill 3. Two new wells were installed and sampled, along with the existing wells, during two rounds of groundwater sampling. Mr. Dodyk noted that a red oil-like fluid was discovered in the well between the active runway and taxiway foxtrot. Groundwater was only present beneath part of the landfill, as bedrock is very shallow along the southwestern side. Mr. Costello added that the aqueduct was installed through the Alluvial Terrace and into the underlying bedrock. This may be creating a dam for the water that flows south in the Alluvial Terrace Aquifer, and may explain why the Alluvial Terrace is dry south of the aquaduct.

Landfill 10 is on the southern end of the runway. Soil and surface water samples were collected, but no monitoring wells were installed because of the presence of dry bedrock at such shallow depths in the area.

Landfill 2 is on base and is located below Building 1055. Soil borings and monitoring wells were installed. Several soil samples were collected, and two rounds of groundwater sampling were completed. The extent of the landfill was defined. Findings indicate that some type of oil or fuel staining was observed in the soil. Additionally, one boring contained what appeared to be fresh gasoline in the vadose zone.

Landfill 9 is located behind the Desert Storm Club. The landfill boundaries were defined by installing soil borings, piezometers and monitoring wells. The elevation of bedrock varies greatly across the landfill. Additional downgradient wells will be installed in the upcoming month.

Landfill 6 is located outside the fence across from the golf course. The boundaries of the landfill have been defined. Several soil samples were collected and two rounds of groundwater sampling were performed.

One additional round of groundwater sampling will be conducted at each of the sites with monitoring wells. An RFI will be prepared after all of the groundwater data is available.

### Air Force Budget Process

Mr. Wilkerson presented the briefing on the Air Force budget process.

A brief description of the Federal Budget was given, describing where the money comes from, where it is spent, and the processes involved. A brief description on the DOD budget was also given, describing the process and how it fits into the Federal Budget process (Attachment 3). A short summary was given on how the RAB can become more involved and how this involvement may result in additional program funding for the base. An overview was given for Carswell's budget for 1999 through 2005.

Mr. Gross commented on the use of the title "Carswell AFB" when referring to the present-day base, because the name is no longer Carswell. NAS Fort Worth JRB should be used to refer to the base.

### Air Force Plant 4

Mr. John Doepler provided an update of the activities at Air Force Plant 4.

#### Program Update

Mr. Doepler presented slides for the briefing on the remedial design projects at Air Force Plant 4 (Attachment 4). Building 181 is undergoing design for the soil vapor extraction. They are currently seeking additional funding to perform dewatering in that area. As part of the enhanced pump and treat design, tracer tests were conducted at Buildings 181 and 182, and the east parking lot. Additional tracer work will be conducted in Fiscal Year 1999 to determine the extent of DNAPL in the area. The purpose of this work is to eventually put in a hydraulic barrier to cut off the DNAPL from the window area. The window area treatment system design is being conducted by Jacobs. Jacobs is using the groundwater model developed by the USGS. The west side paluxy pump and treat system is currently operating with two or three wells pumping. An additional investigation of the source area along Bomber Road will be conducted to determine the extent of the contamination in that area. As part of the discharge permit work, monthly effluent sampling was requested by the TNRCC including fish toxicity testing.

An additional investigation consisting of soil borings and well installations will be performed at the golf course area. HydroGeoLogic is contracted to conduct this work. This work will be part of the remedial action for the plume containment as the wells will be installed so they can be used as recovery wells. A feasibility study will be prepared for the northern and

southern part of the lobes to determine what remedial action will be necessary.

Mr. Gross asks what the worst case scenario would be for the contamination emanating from AFP-4. Mr. Doepler stated that the worst case would be if contamination gets into the Paluxy groundwater through the window area.

The USGS will be doing some fish tissue sampling work, the single indeterminate finding in the Public Health Assessment. The Texas Department of Health concluded that there was not a public health threat from the contamination at AFP-4, but suggested fish tissue sampling in the lake as a precautionary measure.

Comments from the Rail Spur Investigation should be received from the EPA by November 17, 1998. At that point the GSA will take over responsibility for the site.

An agreement was negotiated regarding the Natural Resource Damage Assessment (NRDA). A final draft of the NRDA was completed, which named Mr. Doepler as a Potentially Responsible Party.

Mr. Deopker discussed the fiscal year 1999 budget and stated that funds are available for the long-term operation of the remediation systems and long-term monitoring of groundwater. The surfactant/tracer testing is currently awaiting funding.

#### Discharge Permits Update

Mr. Dozzi provided a briefing on the status of the discharge permit for the groundwater treatment system.

The treatment system at Landfill 3 is currently operating and effluent is discharged into Meandering Road Creek under the current discharge permit. The system is working well, but it is necessary to increase the output. The Air Force would like to combine the discharge from the treatment system operating at Landfill 1 and the discharge from the treatment system at Landfill 3 into one permit that discharges to Meandering Road Creek. A new permit application was prepared to combine these discharges. The permit application is under review and is expected to be approved without any complications. A discharge pipeline will be constructed to transfer the treated water from the Landfill 1 system to Meandering Road Creek. Construction of the pipeline will affect traffic at AFP-4, but the effect should not be significant. A traffic plan has been written to minimize the effects construction will have on the traffic. A problem with surface runoff that partially overflows the treatment system at Landfill 3 during heavy rainfall will be solved by installing an additional drop inlet to divert the runoff.

Mr. Gross asks about the expected time frame for the construction of the pipeline. Mr. Dozzi indicated that they currently do not have all the approvals necessary but it will be approximately January 1999 before the work is started.

**Open Discussion/Questions**

No questions were raised. Captain McDonald stated he was pleased with the progress of work that is being performed and in particular with the property transfer activities. Mr. Doepker brought up the second phytoremediation site they are working on. He asked the attendees for any suggestions they might have on the types of trees to be used.

**Adjournment**

The next RAB Meeting is scheduled for February 11, 1999. Restoration Advisory Board members will be notified by mail of the exact date, time, and place.

The meeting was adjourned at 9:00 p.m.

**In Attendance****Carswell DERA (On-Base)**

Joe Dunkle, HQ AFCEE/ERD  
Michael Dodyk, HQ AFCEE/ERD  
Gary DuPriest, HQ AFCEE  
Roger Wilkerson, HQ AFCEE/ERD  
Todd Harrah, Unitec  
Amy Hardberger, Unitec  
Jim Costello, HydroGeoLogic, Inc.  
Brad Nielsen, HydroGeoLogic, Inc.

**Carswell AFBCA (Off-Base)**

Rafael Vasquez, AFBCA  
Alvin Brown, AFBCA

**Air Force Plant 4**

John Doepler, ASC/EM  
Alex Brisken, ASC/EM  
Daniel Johnson, ASC  
Gregory McGraw, IT Corporation  
Victor Dozzi, IT Corporation  
Norman Robbins, Lockheed Martin TAS

**United States Navy**

Capt. Greg McDonald, NAS JRB  
Wayne McKenzie, Navy Environmental

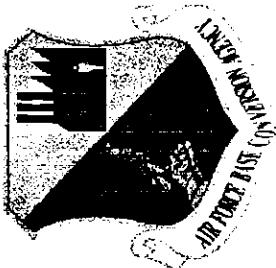
**Texas Natural Resource Conservation Commission**

Tim Sewell, Region 4

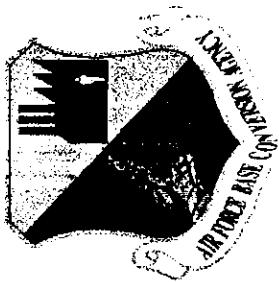
**Others, Off-Base**

Mike Gross, community member  
Vince Wilcox, community member  
D. W. Owen, River Oaks  
Greg Hendrickson, River Oaks  
Leeland Clemons, Westworth Village Redevelopment Authority  
W. F. Olshefski, Lake Worth Civic Club  
Ralph Stangl, Lake Worth Civic Club

# PROGRAM STATUS

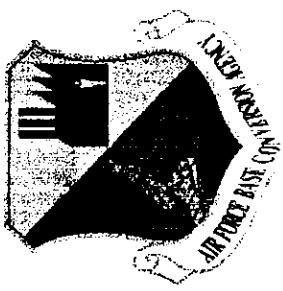


- CLOSURE REPORTS
  - AEROSPACE MUSEUM
  - GOLF COURSE MAINTENANCE YARD
  - GROUNDS MAINTENANCE YARD
  - UNNAMED STREAM
- WEAPONS STORAGE AREA
- SANITARY SEWER INVESTIGATIONS
- LANDFILL INVESTIGATIONS
  - LANDFILLS 4, 5, AND 8
  - WASTE PILE 7



## PROGRAM STATUS CLOSURE REPORTS

- PREPARING WORKPLANS FOR ADDITIONAL SAMPLING DUE TO INVALID DATA FROM LABORATORY
- COMPLETE CLOSURE REPORTS BY SPRING 1999



## PROGRAM STATUS WEAPONS STORAGE AREA

- PREPARING WORKPLANS FOR ADDITIONAL SOIL EXCAVATION IN NOVEMBER 1998
- COMPLETE CLOSURE REPORT BY SPRING 1999



## PROGRAM STATUS SANITARY SEWER INVESTIGATIONS

- PREPARING WORKPLAN FOR ADDITIONAL INVESTIGATIONS TO BE CONDUCTED IN SPRING 1999
- COMPLETE CLOSURE REPORTS BY SUMMER 1999



## PROGRAM STATUS LANDFILL INVESTIGATIONS

- OBTAINING FUNDING TO COMPLETE CORRECTIVE MEASURES STUDY
- COMPLETE DESIGN OF CORRECTIVE MEASURE IMPLEMENTATION (CMI) FOR SOILS ONLY IN SUMMER 1999
- COMPLETE CONSTRUCTION OF CMI IN SPRING 2000

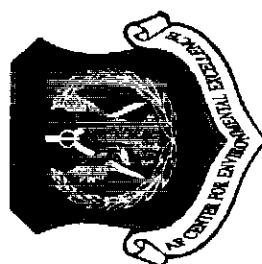
## PROPERTY TRANSFER UPDATE



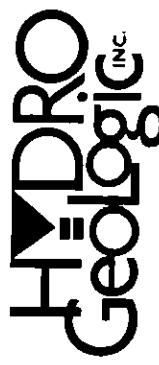
- FINDING OF SUITABILITY TO TRANSFER (FOST)
  - HOUSE IN HORSE STABLES AREA (JANUARY 1999)
  - FEDERAL BUREAU OF PRISON HOSPITAL (MARCH 1999)

**RCRA Landfill Investigation  
NAS Fort Worth JRB  
November 1998**

**Prepared for the  
Air Force Center for  
Environmental Excellence**



**Presented by  
Michael Dodyk, P.E.**



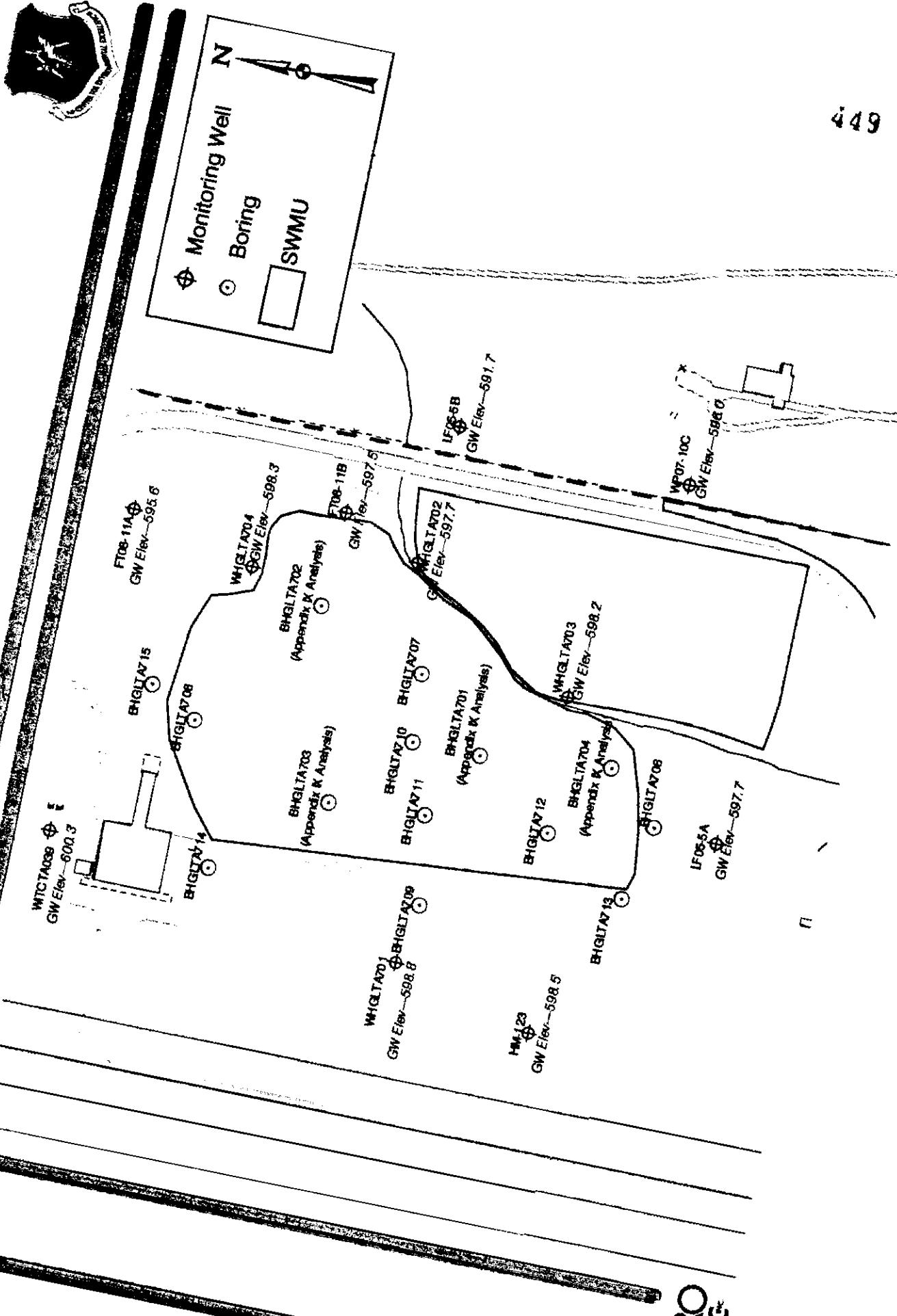
Herndon, VA

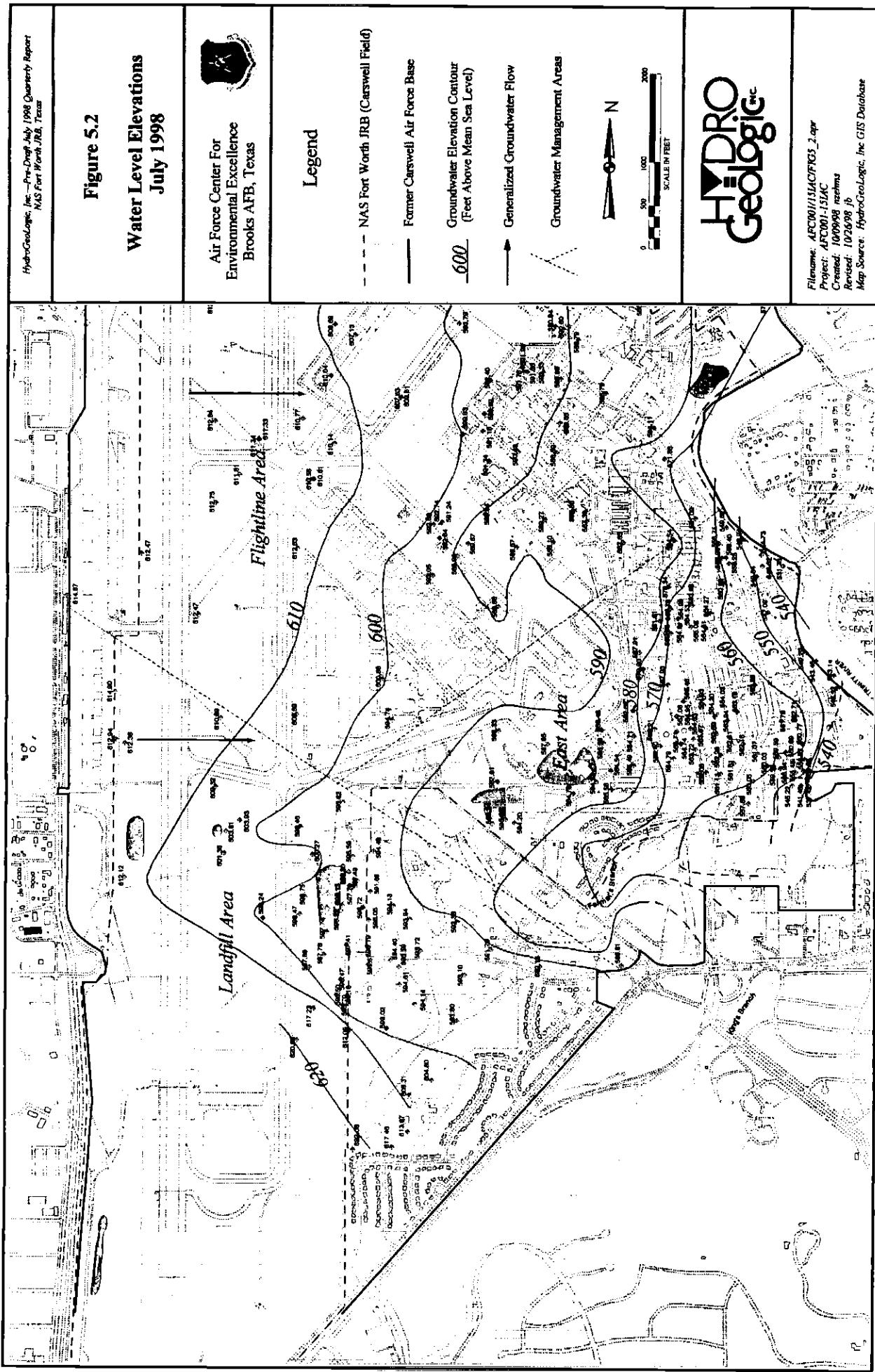
# Investigation Goals

- ◆ Determine extent of landfills
  - Soil borings to define lithology
- ◆ Define potential soil contamination
  - Soil borings collected every 5 feet from surface to groundwater, Appendix IX analysis
- ◆ Determine potential groundwater impacts
  - Install 1 upgradient and 3 downgradient MWS
  - Three rounds of groundwater sampling, 2 months apart

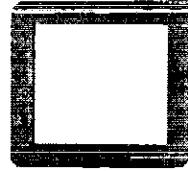


# SWMU 17/Landfill 7





# **SWMU 17/Landfill Investigation**



- ◆ Landfill boundaries delineated
- ◆ 18 borings, including 4 monitoring wells
- ◆ 4 Appendix IX borings; samples collected every 5 feet from surface to groundwater
- ◆ 14 Appendix IX soil samples collected
- ◆ 2 rounds groundwater samples collected, 3rd round December 1998



# SWMU 17/Landfill 7

## *Findings*



- ◆ Debris consists primarily of concrete and asphalt, fence mesh, aircraft aluminum, with some wood, metal, plastic, glass, and bricks
- ◆ Landfill is approximately 16 feet deep in core
- ◆ Edge of paleo-channel crosses southwest portion of landfill
- ◆ Petroleum staining in soils found downgradient of buried aircraft at B702

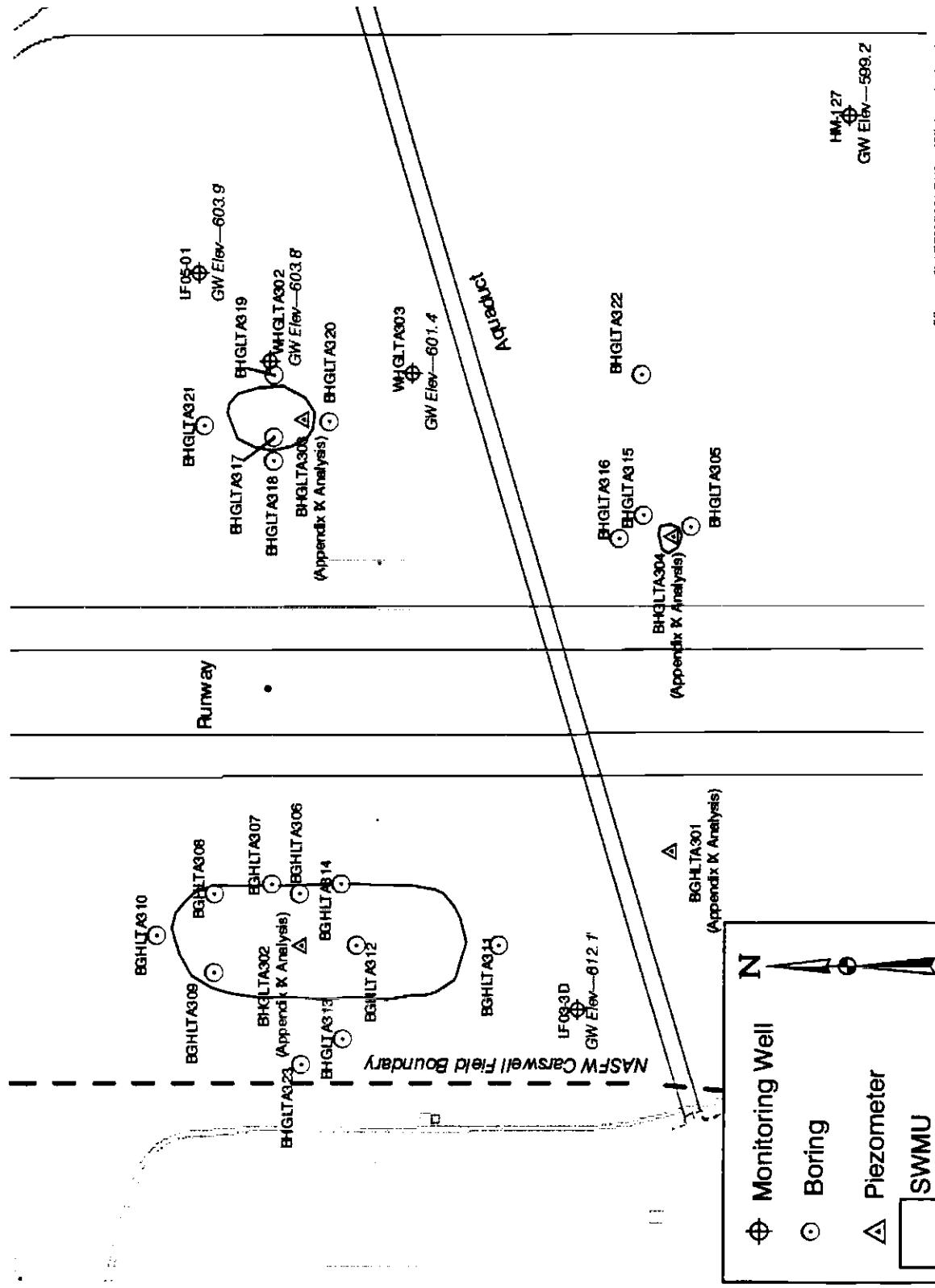
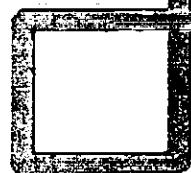
# **SWMU 17/Landfill 7**

## ***Findings (continued)***



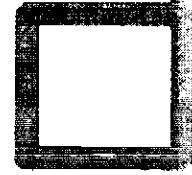
- ◆ Groundwater flows northeast, east, and southeast from LF-7
- ◆ High concentrations of TCE found in upgradient well W701. Low to moderate concentrations found in downgradient wells. (TCE found in W701 is associated with AFP-4 plume).
- ◆ Low concentrations of metals (below background) detected in all wells
- ◆ Awaiting validated results from soil sampling event

# SWMU 26/Landfill 3



# **SWMU 26/Landfill 3**

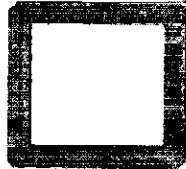
## ***Investigation***



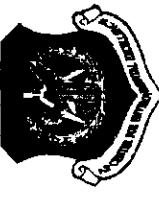
- ◆ Landfill boundaries delineated
- ◆ 23 borings, including 4 piezometers
- ◆ 4 Appendix IX borings; samples collected every 5 feet from surface to groundwater
- ◆ 16 Appendix IX soil samples collected
- ◆ 2 wells installed in northeast quadrant
- ◆ 2 rounds groundwater samples collected, 3rd round December 1998

# **SWMU26/Landfill 3**

## **Findings**



- ◆ Landfill debris moved alongside runway during construction of runway extension
- ◆ Debris consists primarily of asphalt, wood, glass, and scrap metal
- ◆ Most of debris in northwest quadrant, small section is in northeast quadrant
- ◆ No debris found in B304; “red oil-like fluid” found at 15 foot interval, at and just above bedrock. No evidence of “fluid” found in B305, B315, B316, or B322.



# **SWMU 26/Landfill 3**

## ***Findings (continued)***

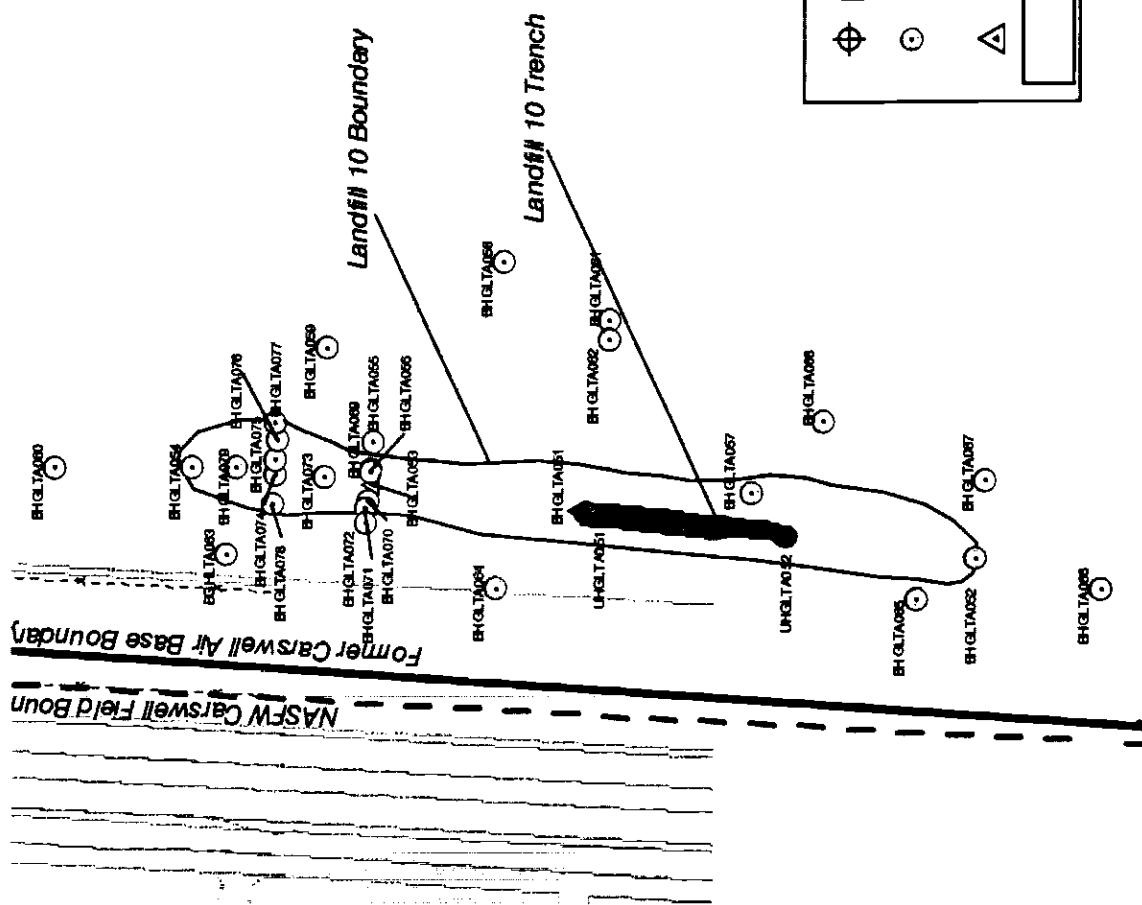


- ◆ Groundwater only found in northeast quadrant (most likely in paleo-channel)
- ◆ Perched water found at piezometer 301
- ◆ No groundwater found in piezometers 302, 303, 304, and selected well locations 322, and 323
- ◆ High concentrations of VOCs and low concentrations of metals detected in W302 and 303. (VOCs related to AFP-4 TCE plume).

# SWMU 27/Landfill 10

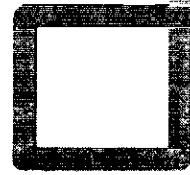


449 27



# **SWMU 27/Landfill 10**

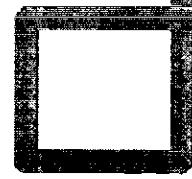
## ***Investigation***



- ◆ 29 borings completed, including 2 piezometers
- ◆ 4 Appendix IX locations
- ◆ 10 Appendix IX soil samples
- ◆ 2 Appendix IX surface water samples
- ◆ No monitoring wells installed

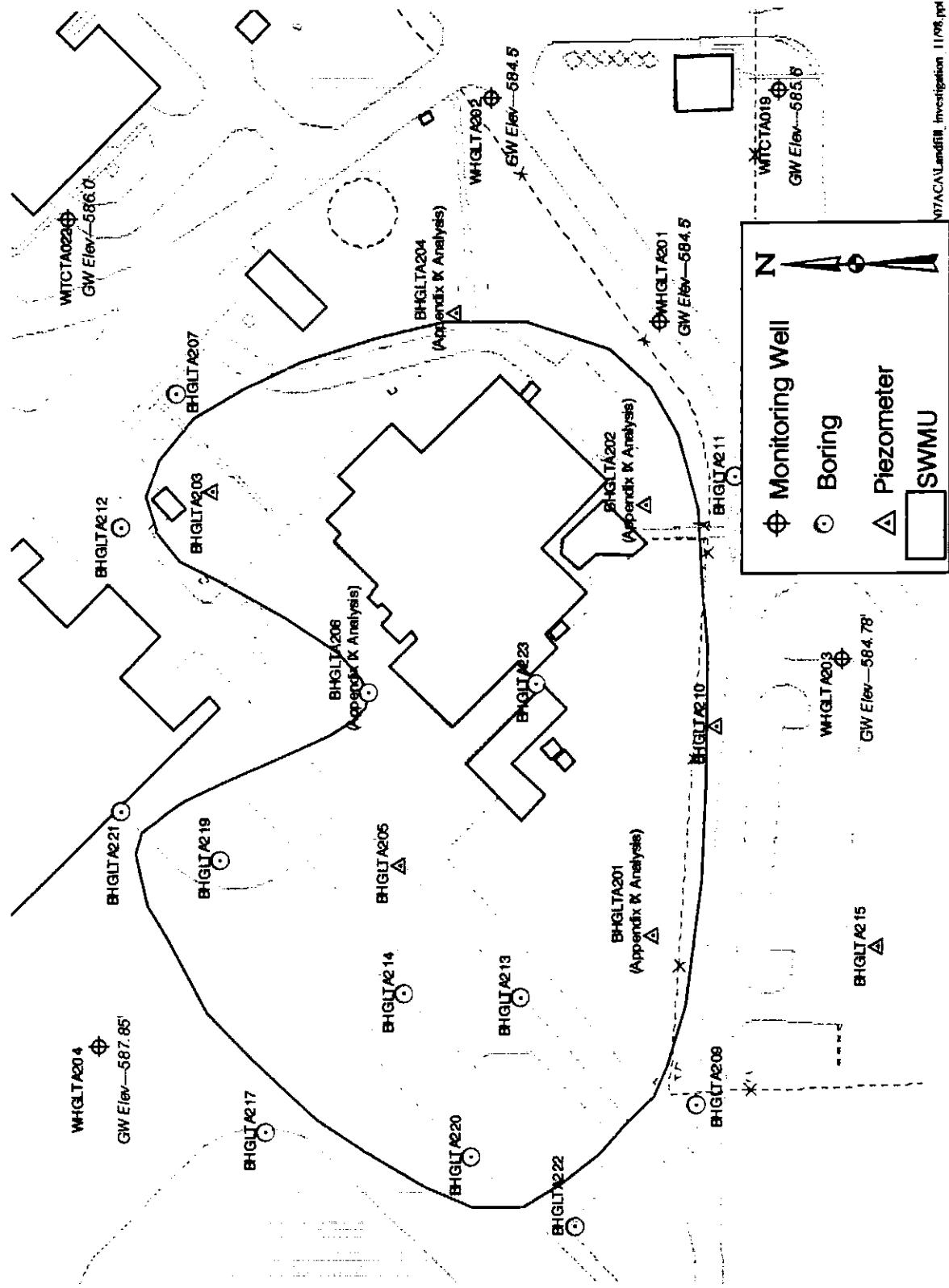
# **SWMU 27/Landfill 10**

## ***Findings***



- ◆ Landfill boundaries delineated
- ◆ Trench excavated 16 feet into bedrock
- ◆ Filled portion of trench extends approximately 450 feet north of pond. Landfill contains bedrock boulders, asphalt, concrete, wood, leaves, and stems.
- ◆ Pond and trench act as catch basin for precipitation; no groundwater found
- ◆ No compounds detected above background in ponded surface water. Awaiting validated results from soil sampling.

# SWMU 29/Landfill 2



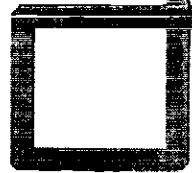


# SWMU 29/Landfill 2 Investigation

- ◆ Landfill boundaries delineated
- ◆ 24 borings, including 7 piezometers, and 4 monitoring wells
- ◆ 4 Appendix IX borings; samples collected every 5 feet from surface to groundwater
- ◆ 14 Appendix IX soil samples collected
- ◆ 2 rounds groundwater samples collected, 3rd round December 1998

# **SWMU 29/Landfill 2**

## ***Findings***



- ◆ Debris consists primarily stained soils with some asphalt, concrete, wood, and glass
- ◆ Oil staining present in borings 201, 205, 206, 214, and 220
- ◆ Fresh gasoline found in vadose zone at B210. Sheen found on water in piezometer.
  - B210 located next to water line

449

**HYDRO  
Geologic**

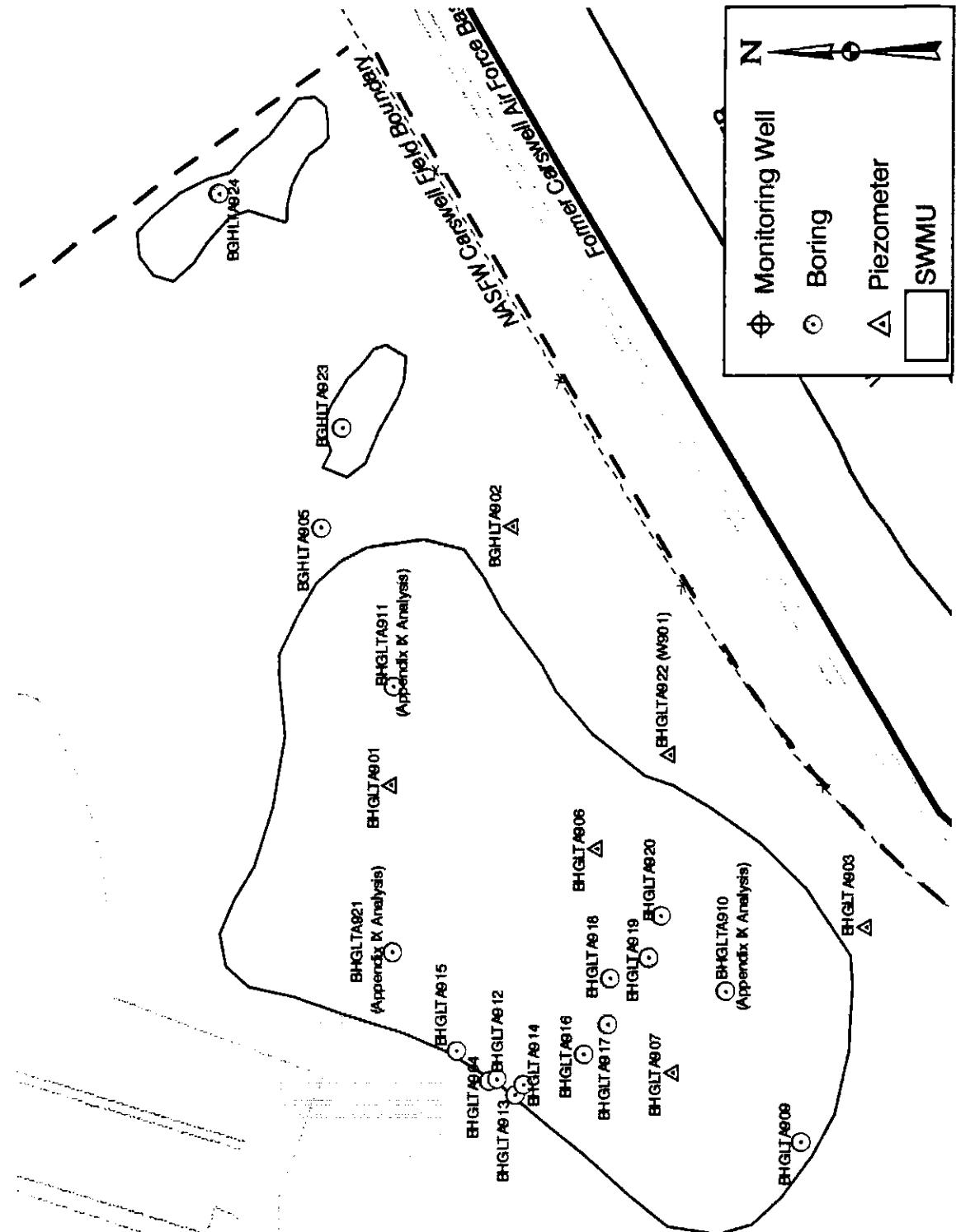
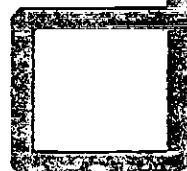


## SWMU 29/Landfill 2 *Findings (continued)*



- ◆ LF2 located on a topographic and hydrogeologic divide
- ◆ Moderate concentrations of chlorinated solvents found.  
(Related to AFP-4 TCE plume)
- ◆ Low concentrations of metals (below background) detected
- ◆ Very low concentrations of SVOCs  
(p-Dimethylaminobenzene 0.002 mg/l) found at W201
- ◆ Awaiting validated results from soil sampling event

# SWMU 30/Landfill 9



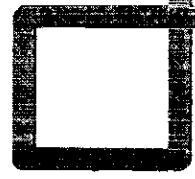
449 34

18

Filename: X:\FC\001\NTACAU\landfill investigation\1194.PDF

# **SWMU30/Landfill 9**

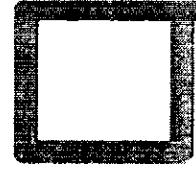
## ***Investigation***



- ◆ Landfill boundaries delineated
- ◆ 23 Borings, 6 piezometers
- ◆ 3 Appendix IX borings
- ◆ 12 Appendix IX soil samples collected
- ◆ Geophysics used to determine bedrock depth with mixed results

# **SWMU30/Landfill 9**

## ***Findings***

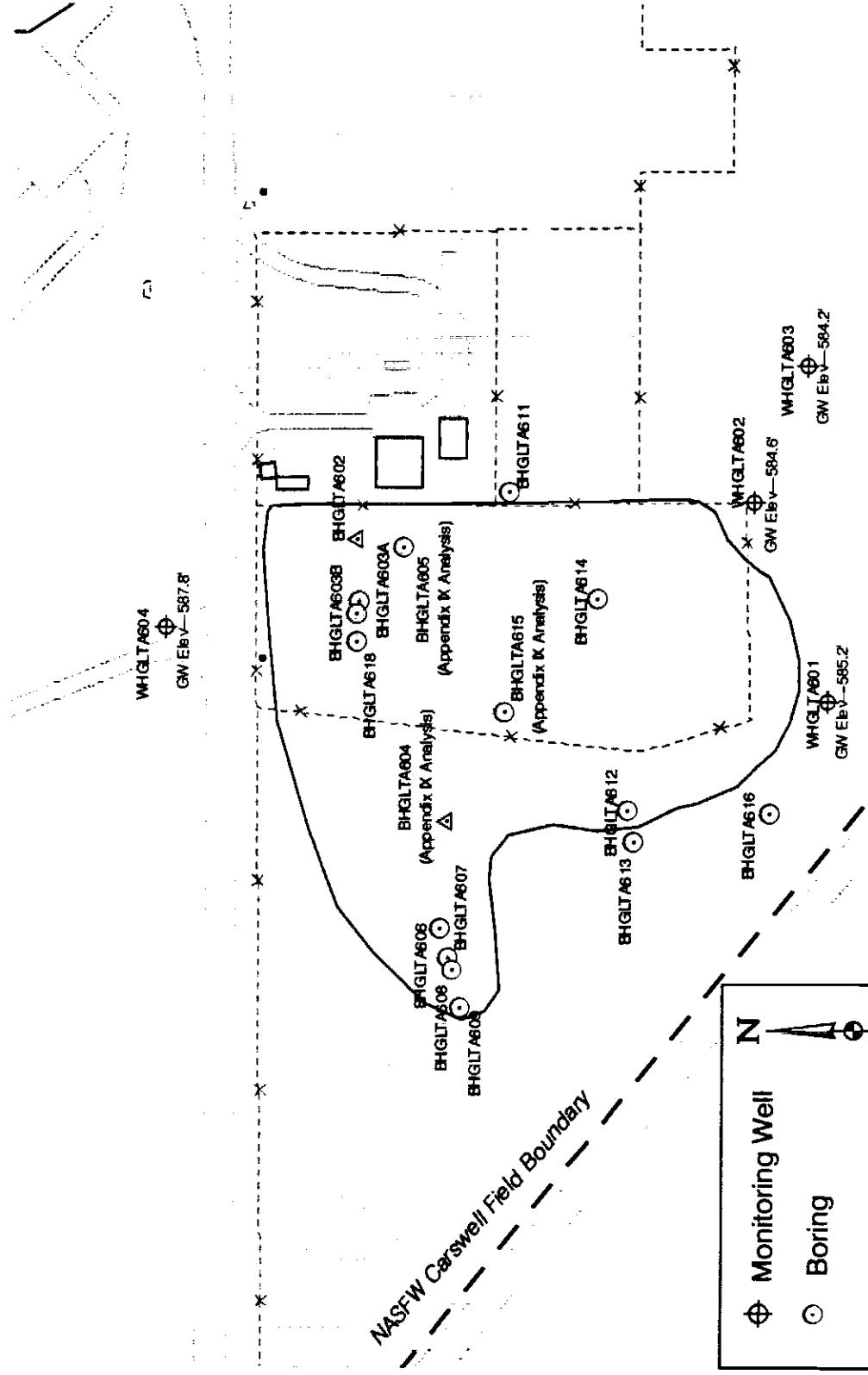


- ◆ Landfill is located on former meander bend of West Fork Trinity River. It is approximately 16 feet deep and contains asphalt, fence mesh, nails, plastic, paint chips, concrete, rebar, and glass.
- ◆ Groundwater flow is to northeast and east
  - ◆ Limestone bedrock outcrops on upgradient portion of landfill. Upgradient bedrock well planned. (Dec. 1998).
  - ◆ Bedrock on downgradient portion of landfill is greater than 45 feet below ground surface (18 feet below river level).
- ◆ 3 downgradient nested wells (2 wells per location with 2 screened intervals) planned (December 1998).
- ◆ Awaiting validated results from soil sampling event

# SWMU 62/Landfill 6

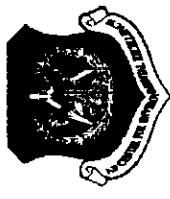
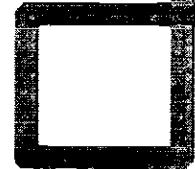
449

37

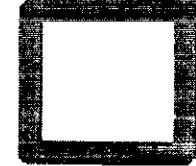


# **SWMU 62/Landfill 6**

## ***Investigation***



- ◆ Landfill boundaries delineated to north, south and east.
- ◆ 20 borings, including 2 piezometers, and 4 wells
- ◆ 3 Appendix IX borings; samples collected every 5 feet from surface to groundwater
- ◆ 12 Appendix IX soil samples collected
- ◆ 2 rounds groundwater samples collected, 3rd round December 1998



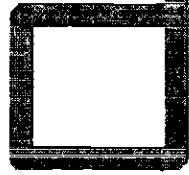
## SWMU 62/Landfill 6 Findings



- ◆ Landfill is approximately 12 feet to 16 feet deep in core. Shallow debris field (< 5 feet) extends to the east.
- ◆ Debris consists primarily of concrete and asphalt with some wood, metal, and glass. Extension of northwest lobe of landfill contains primarily wood and asphalt.
- ◆ LF6 located south of topographic and hydrogeologic divide. Groundwater flow is south towards Farmers Branch Creek.
- ◆ Moderate concentrations of chlorinated solvents found in groundwater (associated with AFP-4 TCE plume). Low concentrations of metals (below background) detected in groundwater.

H<sub>2</sub>DRO  
Geologic

◆ Awaiting validated results from soil sampling event



## Recommendations

- ◆ Continue to monitor landfill wells for VOCs, SVOCs, and metals during third round of sampling
- ◆ Delineate extent of soils contamination, where found, to background levels
- ◆ Prepare RFI Landfills Report



# *DoD Environmental Security Budget*

Presented By Roger Wilkson



# *Purpose of Briefing*

- Give you an understanding of the overall Federal budget process
- Where YOU can get involved in the process

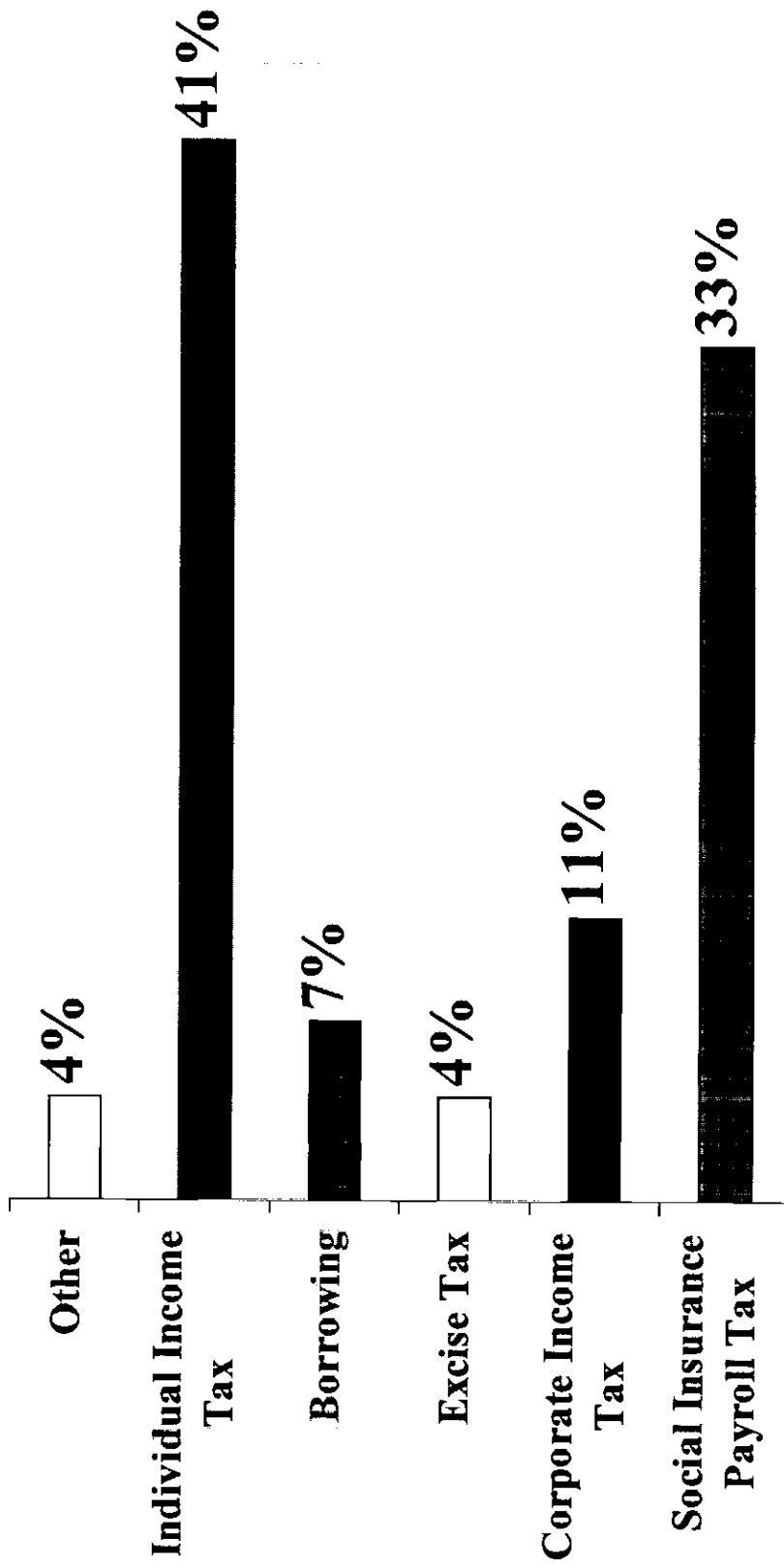


# Overview

- The Federal budget process
- The DoD budget process

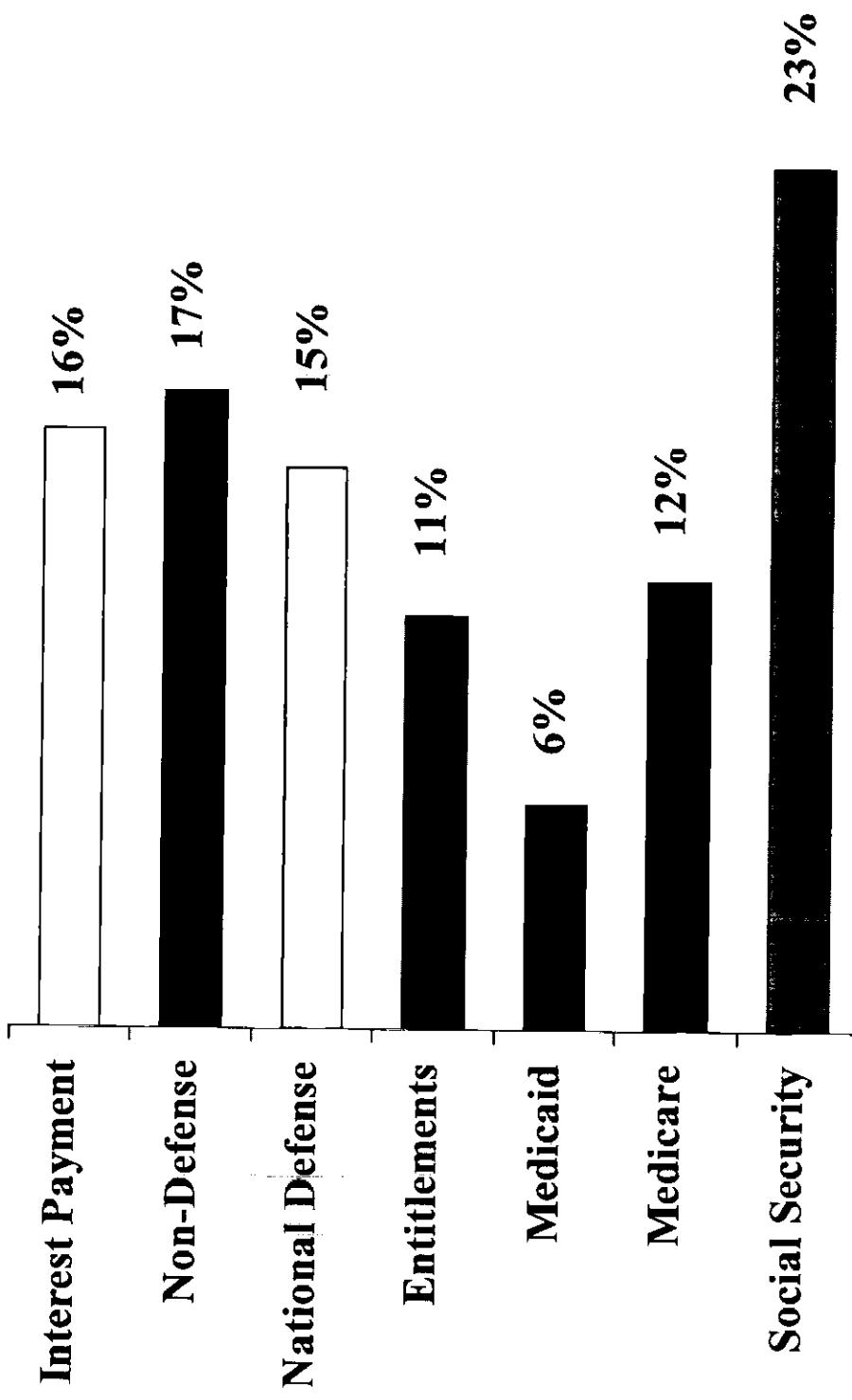


# *Federal Budget Revenues*





# *Federal Budget Spending*





# *The Federal Budget*

## FY2000

Steps	Timeframe
Agencies develop requests for funds and submit them to the OMB. The President reviews the request and makes the fiscal decisions on what goes in the FY00 budget. Budget is prepared and transmitted to the Congress	Feb 98 - Dec 98
The Congress reviews the President's proposal budget, develops its own budget, and approves spending and revenue bills. FY 2000 begins	Mar 99 - Sep 99
Agency program managers execute the budget provided in law	Oct 99
Data on actual spending and receipts for the completed fiscal year become available	Oct 00 - Nov 00



# The DoD Budget

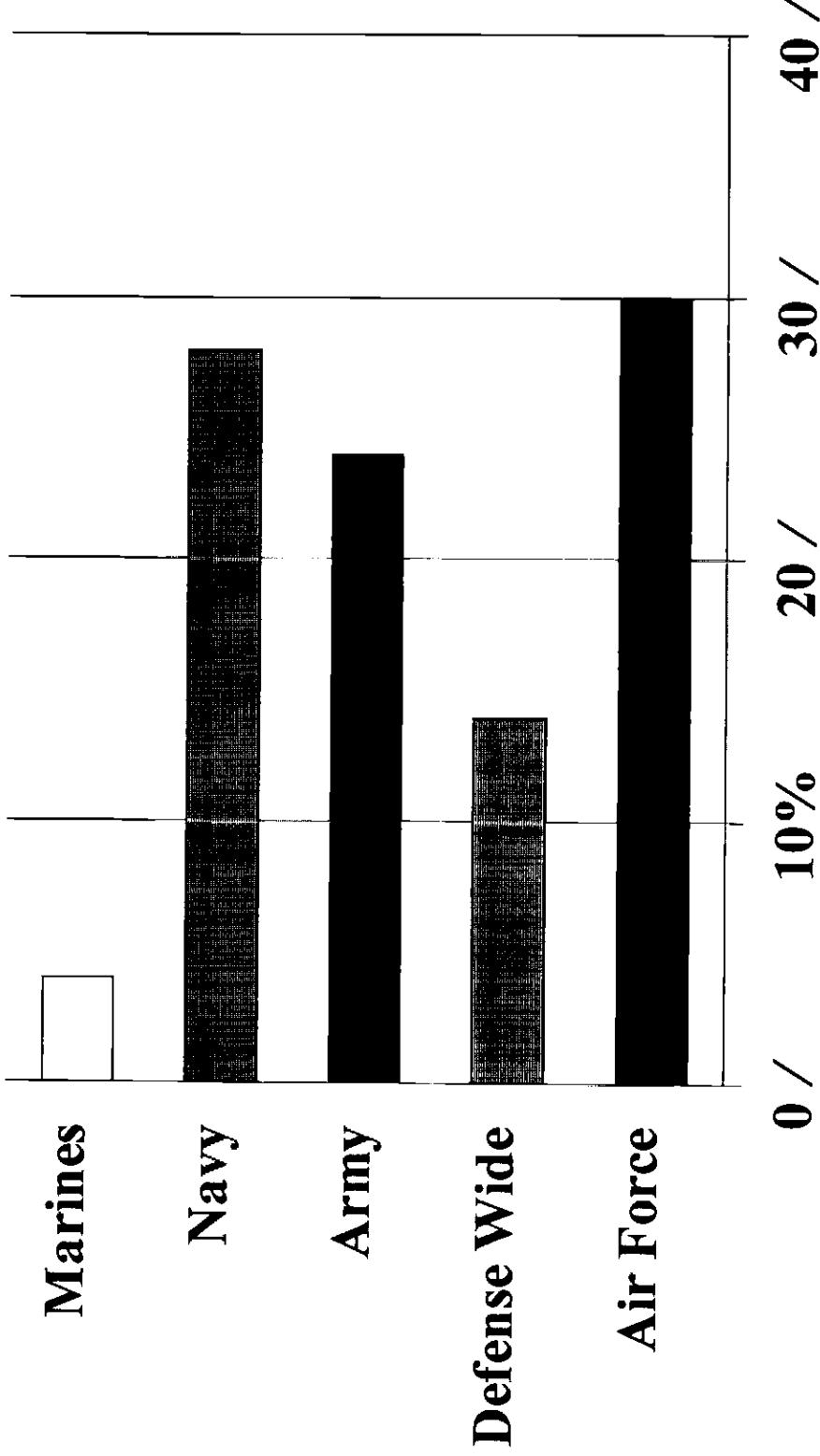
The Planning, Programming, and Budgeting System (PPBS)

FY2000

<b>Requirements for years 2000 – 2005 sent from base to MAJCOMS</b>	<b>Nov 97 – Dec 97</b>
<b>Analysis and Development of POM issues</b>	<b>Dec 97 – May 98</b>
<b>FY00 budget submission from MAJCOMs in accordance with budget controls</b>	<b>Jun 98</b>
<b>OSD evaluates POM decisions</b>	<b>Jul 98 – Aug 98</b>
<b>FY00 Budget prepared and sent to OMB</b>	<b>Aug 98 – Dec 98</b>
<b>FY00 Budget sent to Congress</b>	<b>Feb 99</b>
<b>FY00 Congress Reviews</b>	<b>Mar 99 – Sep 99</b>
<b>Congress passes Appropriation bills</b>	<b>Sep 99</b>



# The DoD Budget





## *RAB Participation*

- During development of annual requirements
- Out-of-Cycle requirements
- Providing input during the investigative and remedial action phases of the IRP
- Review and development of cost to complete



# Air Force Plant 4



AFP 4/Carswell

## Restoration Advisory Board Meeting

5 November 1998

# Remedial Design



- Soil Vapor Extraction @ Building 181
  - 90% Design Report is Complete
  - Seeking Funding to De-water the Site
  - De-watering Minimizes Contaminant Mobilization, thus Reducing Risk
  - De-watering Opens Consideration for Additional Enhanced Clean-up Efforts

# Remedial Design

## East Parking Lot



- Enhanced Pump & Treat
  - Building 181 Tracer Test  
(Confirmed Presence of DNAPL)
  - Outside Building 182 Tracer Test  
(Confirmed Presence of DNAPL)
  - East Parking Lot  
(No DNAPL Present)
  - Additional/FY99 Tracer Tests Scheduled to Further Quantify DNAPL Zone

# Remedial Design

## East Parking Lot



- Hydraulic Control System
  - Goal is to Cut Off Source from “Window Area”
  - Additional FY99 Tracer Tests for Proposed Hydraulic Barrier Site
  - Draft Technical Report will:
    - Summarize Technology Options
    - Propose Optimum Hydraulic Barrier

# Remedial Design East Parking Lot



- Window Area Treatment System
  - Design is 30% Complete
  - USGS/Jacobs Engineering Utilizing Ground Water Model to Determine Location & Pumping Rates of Extractions Wells
  - Window Area Located Above Run-Up Stations
  - Alternative Extraction Well Schemes are Being Considered (i.e. Horizontal Wells)

## Remedial Actions

- West Side Paluxy Pump & Treat System
  - Two of Three Wells are On-Line
  - Additional Investigation of Source Area (LF01 at West Parking Lot) Scheduled
  - Discharge Piping from West Side Paluxy System
    - Awaiting Discharge Agreement w/TNRCC
    - Month Long Sampling Event Performed
    - Biomonitoring Performed on System Effluent
    - Phytoremediation Effort at LF03 will Commence Following Completion of Discharge Agreement

## Carswell Field Golf Course



- Offsite Investigation Complete
- Investigation of Roaring Springs/White Settlement Road Intersection Proceeding
- Two Additional Projects on Contract
  - Remedial Action for Plume Containment
  - Determination of Appropriate Clean-Up Actions for AFBCA/Golf Course Area

## Air Force Plant 4



- Public Health Assessment

- One Indeterminate Finding from Assessment
- USGS will Perform Fish Tissue Sampling at Lake Worth
- USGS/Austin has Experience Satisfying Texas Department of Health Sampling and Analysis Requirements in Support of PHAs.

## Air Force Plant 4



- Rail Spur Investigation
  - Awaiting Regulatory Comment/Concurrence
  - Following Concurrence GSA will Proceed with Property Dispersal
- Natural Resource Damage Assessment
  - Final Draft Memorandum of Agreement has been sent to Air Force
  - Air Force is Trustee and PRP

# Air Force Plant 4



- Fiscal Year 1999 Budget
  - Long Term Operations
    - Contracting Actions are On-Going
  - Long Term Monitoring
    - Contracting Actions are On-Going
  - Surfactant/Tracer Testing
    - Awaiting Funds Dispersal
    - Considering De-Watering & Enhanced SV

# Air Force Plant 4



- Questions?
- Call with questions and/or concerns
  - Toll Free at 1-800-982-7248
  - John Doepler x416
  - Dan Johnson x346

*Groundwater Investigation*  
Carswell AFB

*John Doeper*



# Status: TCE Groundwater Plume Prior to July, 1998

TCE concentrations at the eastern most sentinel well, MW-IT-01T were between 50-61  $\mu\text{g/l}$  in 1997, 40  $\mu\text{g/l}$  in January 1998, and 14.5  $\mu\text{g/l}$  in April 1998. The leading edge of the TCE plume had not been defined to the east, south, and north.

## Goals: Sampling Strategy

- Sample within transects on 300' x 450' grid*
- Continuous core to bedrock*
- Set temporary piezometers with screens at zone of highest permeability*
- Locate new sentinel monitoring wells based on direct push investigation results*

## *Investigation: Current Status*

TCE plume divided by Farmers Branch Creek

Low Concentrations may have migrated  
as far east as Route 183  
Farmers Branch Creek appears to be  
the primary receptor for both the  
Northern and Southern plumes

## *Investigation: Current Status*

- Surface water samples were ND at confluence of Kings Branch Creek and Farmers Branch Creek
- Surface water samples collected along Kings Branch Creek were ND

## *Recommendations*

- Install a sentinel well along eastern boundary of northern TCE plume*
- Install 8 sentinel wells to define boundaries of southern TCE plume*
- Well Locations: B18, B15, B23, B7, B9, B11, and between B27 and B3*
- Selected wells will be incorporated into existing TCE treatment system*

HydroGeologic, Inc. - TCF Investigation  
NAS Ft. Worth, JRB Texas

TCE Plume Investigation  
NAS Ft. Worth, JRB Texas  
July/August 1998

Air Force Center for  
Environmental Excellence  
Brooks AFB, Texas

Legend

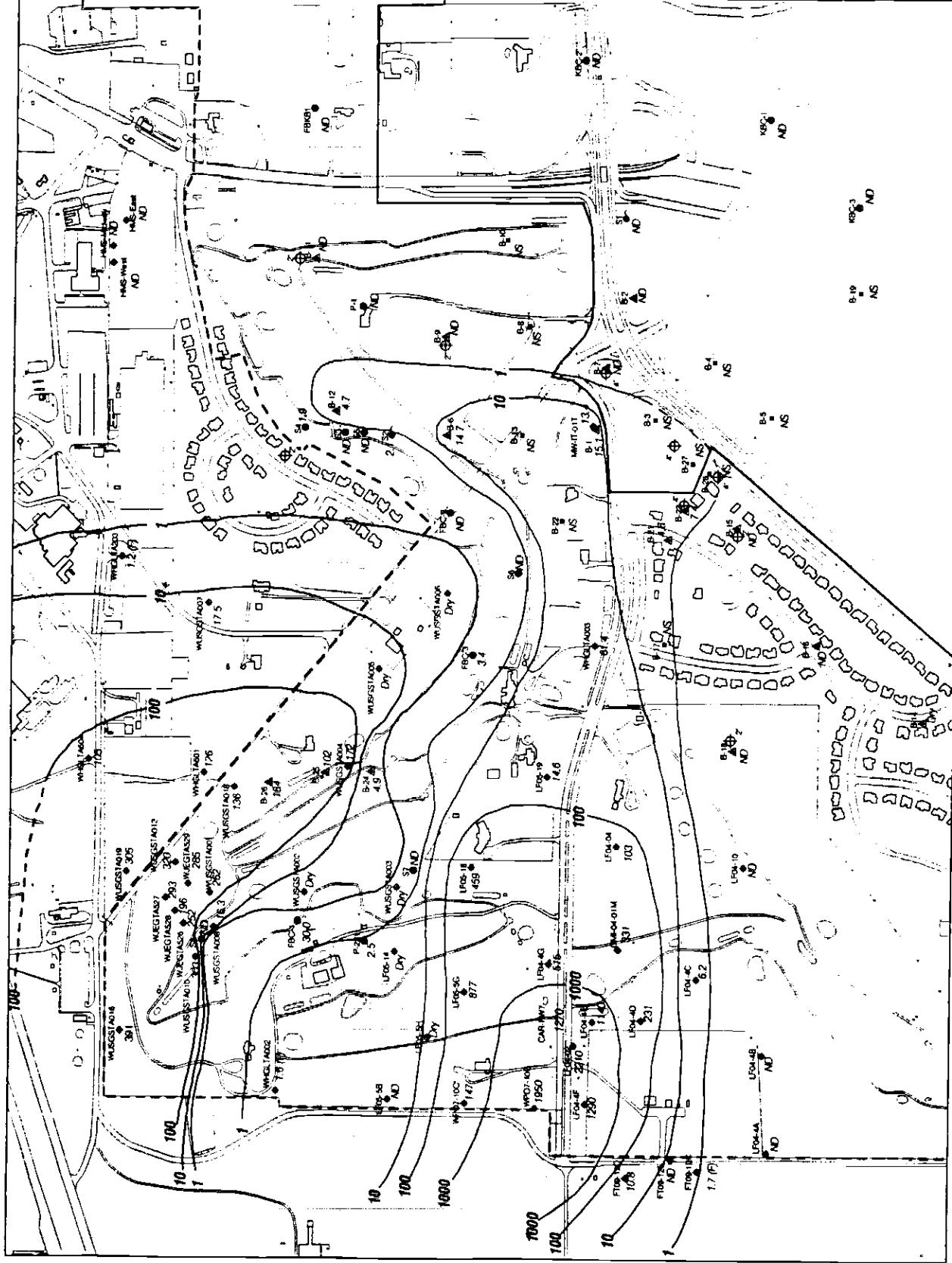
- Former Carswell AFB
- - - NAS Ft. Worth, JRB
- Monitoring Wells
- USGS Monitoring Wells
- Surface Water Sample
- Refusal
- Spring
- Piezometer
- Proposed Monitoring Wells

- NS — No Sample
- ND — Non-Detect
- TCE -- North Plume (ug/L)
- TCE -- South Plume (ug/L)

H.D.R.O.  
Geologic

200 0 200 400 feet

Reference: NAFI-1991-RH-1000-Hydrogeologic Map  
Prepared for the U.S. Army Corps of Engineers  
Hazardous Materials Response Team  
TCE Plume at JRB, Ft. Worth, TX





# Offsite Weapons Storage Area (WSA) Status

Presented By

Bob Duffner

The Environmental Company, Inc.

# Chronology of Offsite WSA RFI Documents

- Draft RFI January 1998
- Addendum to Draft RFI May 1998
- Final Characterization, Removal Action, and Site Closure Letter
- Draft Final Characterization and Removal Action Work Plan August 1998

# Key Issues

- Cleanup Levels Revised Based on SPLP
- Identification of “Clean” Areas
- Identification of Areas Requiring Action
- Identification of Areas Requiring Additional Characterization and Possible Action

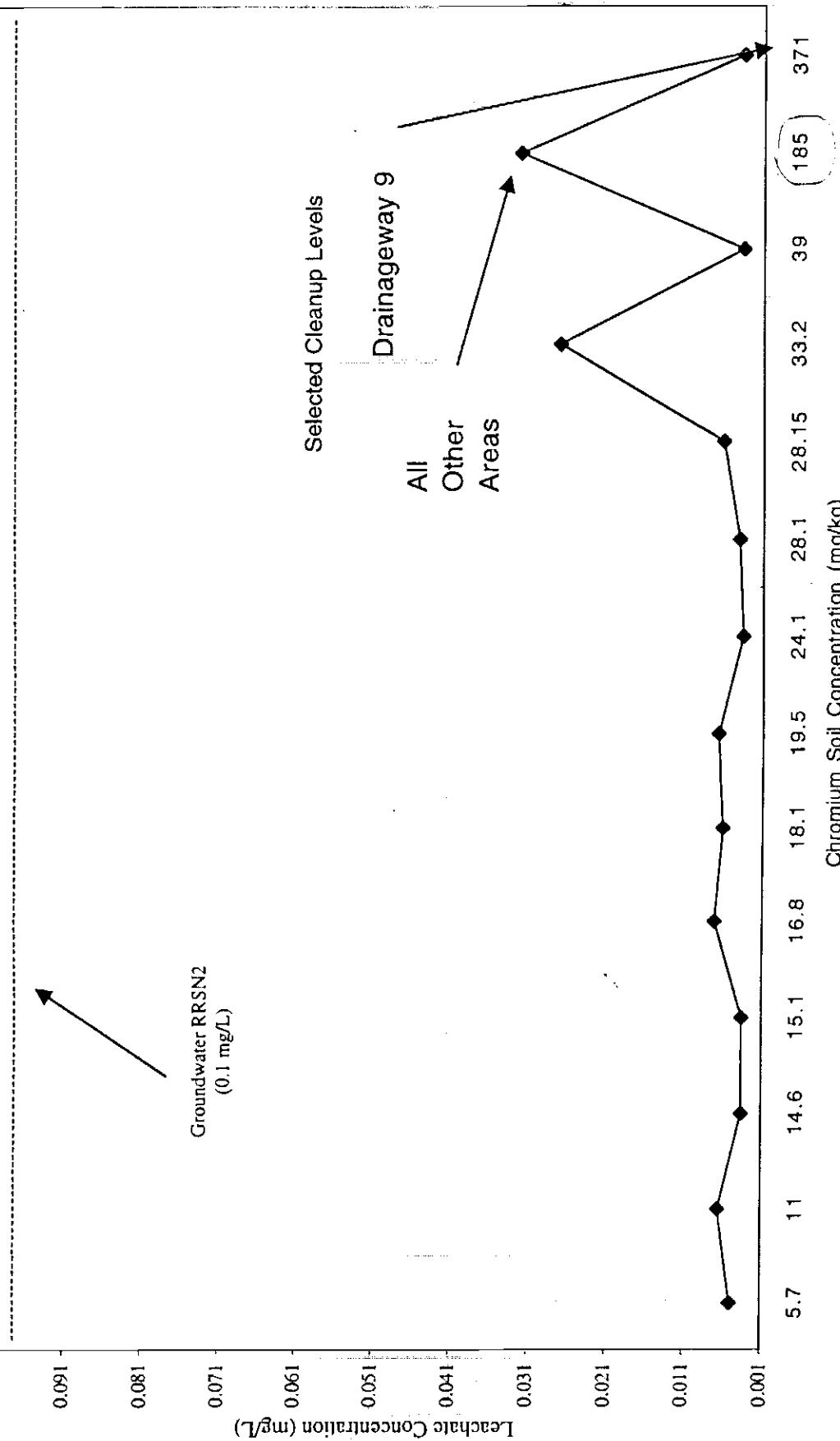
# Revised Cleanup Levels

- Addressed EPA/TNRCC Comments
- SPLP analyses presented in May Addendum
  - Based on Multiple Samples
    - PAHs 3
    - Metals 13
    - Mercury 4
    - Drainage Way 9 1 (*Summa 61 Site Closure (initial)  
TNRCC Letter*)

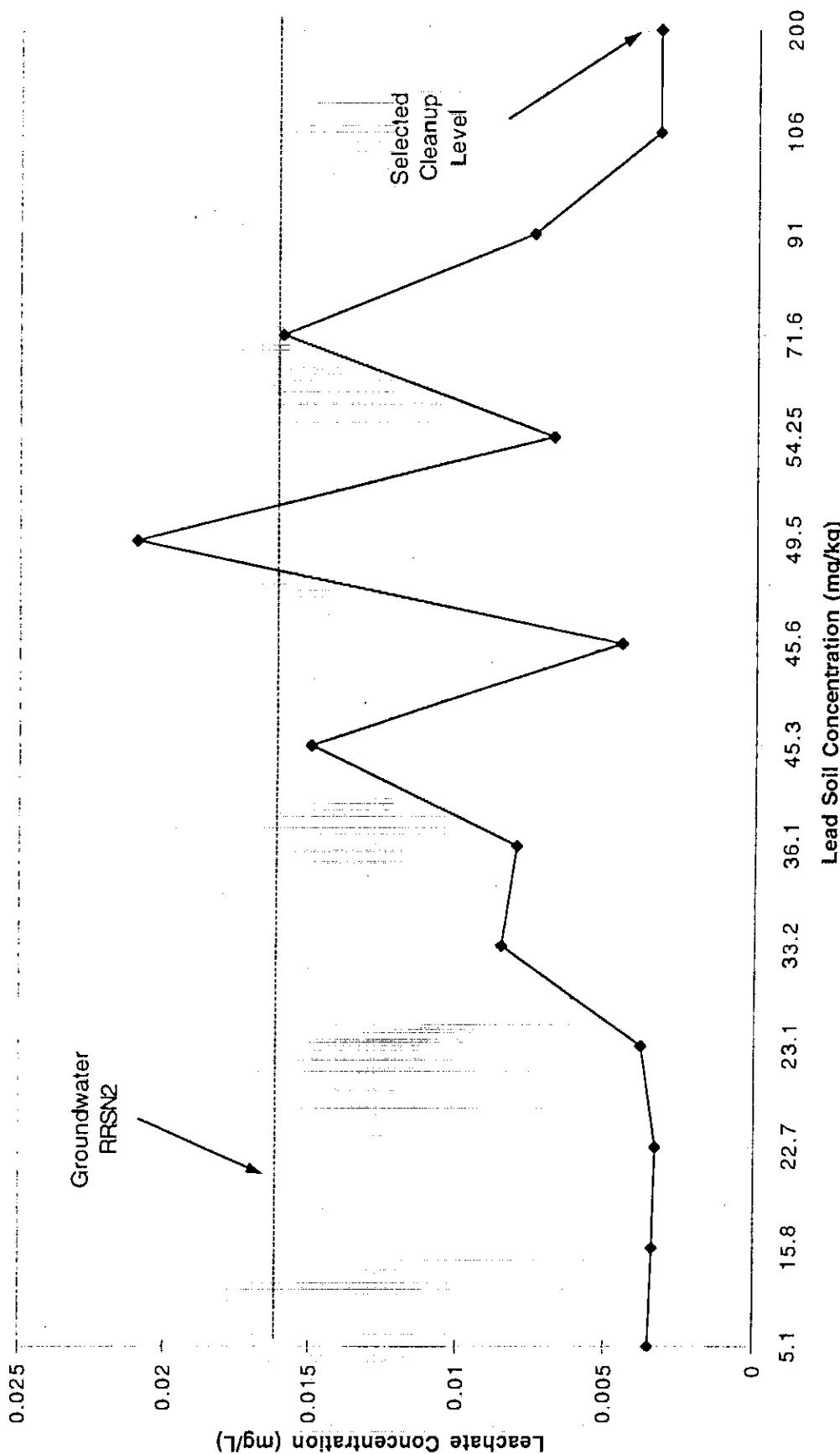
## Revised Cleanup Levels (continued)

- Selected Highest Soil Conc. Corresponding to Leachate Result < RRSN2 Groundwater Concentration
  - Metals With Cleanup Levels Modified Based on SPLP:
    - Arsenic
    - Chromium
    - Nickel
    - Cadmium
    - Lead
- Separate Drainageway 9 Cleanup Levels

### Synthetic Precipitation Leachate Procedure Results for Chromium in Soil



### Synthetic Precipitation Leaching Procedure Results for Lead in Soil



## Identification of “Clean” Areas

- Characterization Complete and No Further Action Necessary
- No Chemicals of Concern (COC)
- Concentrations Below Proposed Cleanup Levels

## “Clean” Areas (continued)

- Area A-1, Except A1-019 and A1-028
  - Former USTs Bldgs. 8503 and 8514;
- Area A-2
  - Transformer Locations
- Vehicle Fueling A-4
  - Drainageways
    - 2, 5, 6, 7, 8, 9
- Disturbed Surface Area A-5
  - Drainageway Locations
    - DW3-002, DW3-003, and DW4-002.
- EOD, Except EOD-006 and EOD-009
  - Bunker Floor Drains

# Areas Requiring Action

- COCs Concentrations Exceed Proposed Cleanup Levels
- Sources Known
- Extent Characterization → Removal Action
  - EOD-006 → Dinitrotoluene
  - DW3-001 → PAHs
  - USTs → PAHs
    - Bldgs. 8500, 8505, and 8507

# Areas Requiring Additional Characterization and Possible Action

- COC Concentrations Exceed Proposed Cleanup Levels
- Sources Unknown or Questioned
- Additional Verification of Contamination Required
  - Complete Characterization → Confirm → Removal Action Source or No Action

# Areas Requiring Additional Characterization and Possible Action

- Sources Unknown
  - A1-028 → Nickel
  - A3-006 → Mercury
  - A3-019, A3-020 → Antimony
  - EOD-009 → Thallium

# Areas Requiring Additional Characterization and Possible Action

- Sources Questioned
- PAH Contamination Potentially Due to Roadway and Parking Area Runoff
  - Area A-3
  - Drainageway 1
  - Sample Location DW4-001
- Roadway /Parking      → No Further Sources Action

# Proposed Field Sampling

Sampling Focused on PAHs and Inorganics

- Quick-Turnaround Analyses For In-Field Extent Determination
- Primarily Focus on Horizontal Extent Utilize Existing Characterization Data
  - No Additional Vertical Extent Sampling if Currently Demonstrated

# Proposed Removal Action

Excavation and Off-site Disposal

Primarily Limited to 0 to 6 inch Interval

- Limits of Excavation Based on Prior Extent Determination

– No Final Verification Sampling Proposed



# RV Fam Camp and Fuel Pipeline Status

Presented By

Bob Duffner

The Environmental Company, Inc.

# Current Project Status

- Site Characterization Reports
  - Final Reports Issued June 1998
  - No Contaminant Sources Identified
  - Utilized ITS Analytical Data
  - No Further Action Conclusion

# RV Fam Camp Summary

- Initial Concern - Alleged Leach Field
- Completed Investigation Actions
  - Geophysical Survey
    - Negative
  - Soil Chemical Characterization
    - VOC, SVOC, Inorg, Pest/PCB, TPH
    - Low Level Pesticides
    - No Indication of Source

# RV Fam Camp Summary

- Proposed Action
  - Resample
    - VOC, SVOC, Inorg, Pest/PCB
    - No TPH

# Fuel Pipeline Summary

- Initial Concern
  - General Fuel Distribution
  - Reported “Fuel” Odors
    - Near Farmers Branch
    - Near Unnamed Stream
  - Fuel Release
    - Adjacent to Trinity River near Base Service Station

# Fuel Pipeline Summary

- Completed Investigation Actions
  - Developed Historical Profile
    - Periods of Operation
    - Fuel Types Distributed
  - Soil Gas Survey
    - Potential Hydrocarbons
      - Unnamed Stream
      - Trinity River Near Base Service Station
      - “Valve Box” Area

# Fuel Pipeline Summary

- Completed Investigation Actions  
(continued)
  - Soil Chemical Characterization
    - Four Areas
      - Unnamed Stream                    – Trinity River
      - Farmers Branch Creek    – Valve Box
  - BTEX, VOCs, SVOC, Inorg, TPH, Hydrocarbon Fingerprinting

# Fuel Pipeline Summary

- Soil Chemical Characterization Results
  - Unnamed Stream
    - Confirmed Area JP4 Contamination
    - Pipeline Distributed Gasoline and Diesel
    - Attributable to Upgradient Sources
  - Trinity River
    - Confirmed Contamination Area Gasoline
    - Pipeline Previously Excavated and Visually Inspected
    - Not In Operation During Suspected Release Period
    - Attributable to Upgradient Sources

# Fuel Pipeline Summary

- Soil Chemical Characterization Results  
(continued)
  - Farmers Branch Creek
    - No Contamination Identified
  - Valve Box
    - Low Level Contamination
    - Attributable to Minor Valve Leak

# Fuel Pipeline Summary

- Proposed Action
  - Farmers Branch Creek
    - Resample VOC, and SVOCs
  - Unnamed Stream
    - No Further Action
  - Trinity River
    - No Further Action
  - Valve Box
    - No Further Action

# Final Documentation

- Summary Letter Reports Only
  - Summary of Reanalysis Efforts
  - Analytical Data
  - Comparison to Screening Levels
  - Confirm or Reassess “No Further Action Conclusion”

# Air Force Plant 4/NAS Fort Worth JRB Focused Feasibility Study/Interim Remedial Action Work Plans

James P. Costello, P.G.

February 11, 1999

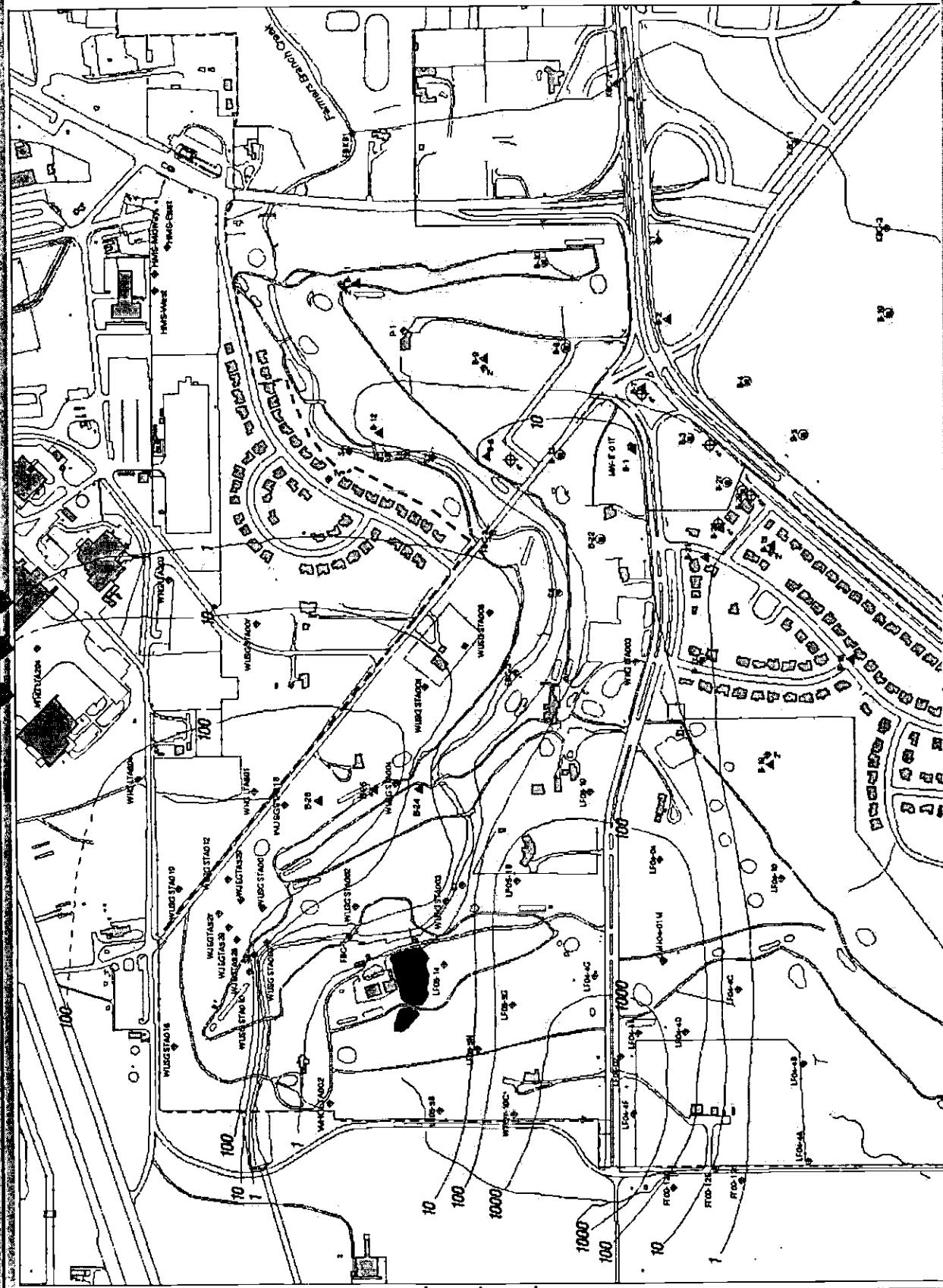


HYDRO  
Geologic

# Objectives

- ◆ FFS to be performed to select a remedial technology to prevent TCE plume from migrating off future DOD property boundaries
- ◆ IRA to be performed to contain a lobe of the southern plume area which has migrated to the DOD property boundary

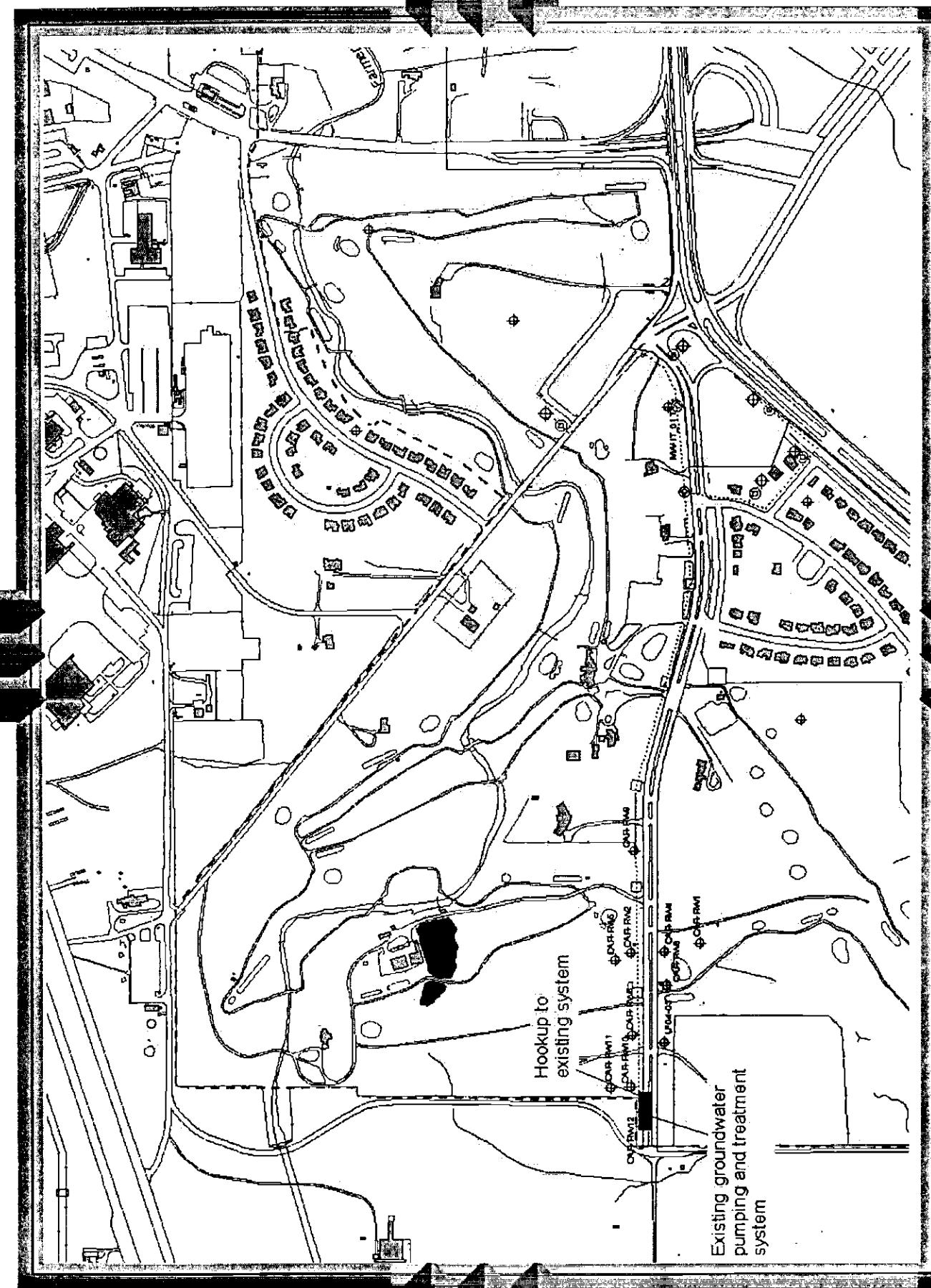




## Field Tasks

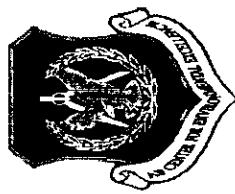
- ◆ Monitoring/extraction well installation and groundwater sampling
- ◆ Aquifer testing
- ◆ Renovation of groundwater pump and treatment system
- ◆ Maintenance and operation of groundwater pump and treat system



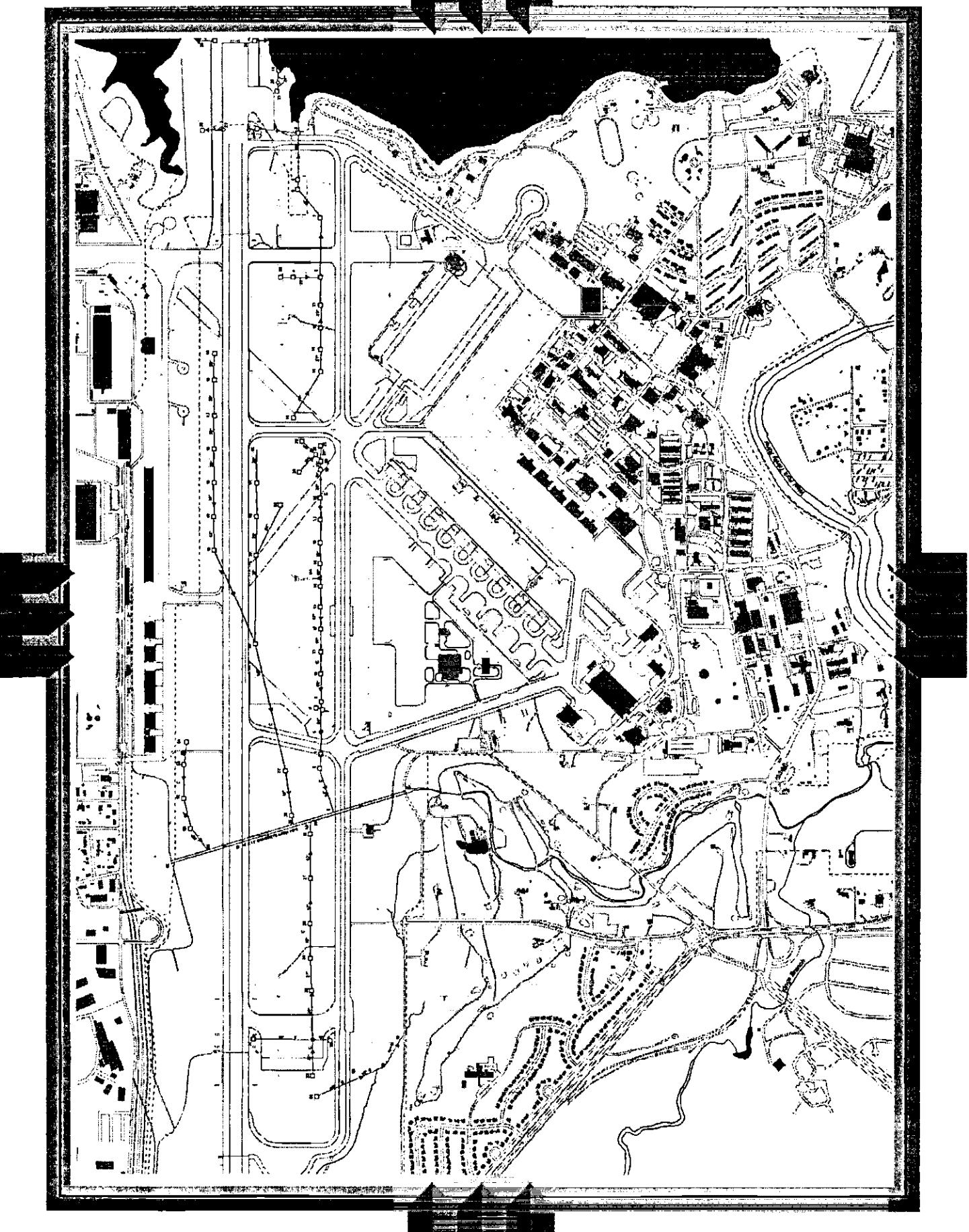


# Focused Feasibility Study

- ◆ Review runway storm drainage system and NAS Fort Worth JRB storm drainage system for effect on groundwater flow
- ◆ Perform up to three pump tests on the most critical wells to characterize groundwater flow

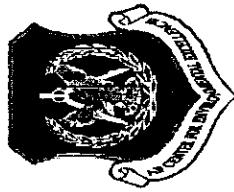


449 100

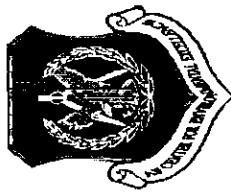


# Renovations

- ◆ Replace hoses, piping, filters, gauges, and seals to improve performance
- ◆ Add up to five extraction wells depending on groundwater sampling results
- ◆ Additional piping will be installed along White Settlement and Roaring Springs Road
- ◆ HydroGeoLogic has already replaced 7,000 pounds of activated carbon (polishing agent)



**HYDRO  
GeoLogic**  
Inc.

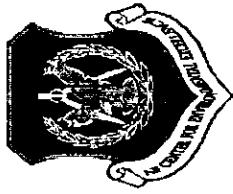


# Operation and Maintenance

- ◆ Initial biosampling per TNRCC requirements
- ◆ Weekly sampling of treatment system influent and effluent for VOCs, especially
- ◆ Repeat biosampling after three months per TNRCC requirements

# Project Deliverables

- ◆ IRA Design Report
- ◆ Construction Completion Report and AS-Built Drawings
- ◆ Focused Feasibility Study Report
- ◆ Explanation of Significant Differences Report
- ◆ Monthly Reporting to TNRCC on treatment system performance





# RV Fam Camp and Fuel Pipeline Status

Presented By

Bob Duffner

The Environmental Company, Inc.

February 11, 1999

# Subsurface Soil Resampling

- RV/Fam Camp
  - Resampled for VOC, SVOC, Inorg, Pest/PCB
- Farmers Branch Creek
  - Resampled for VOC, and SVOCs

# RV / Fam Camp

- Pest./PCBs
  - Not Detected
- Semivolatiles
  - Bis(2-ethylhexyl)phthalate Only
- Volatiles
  - Toluene- 0.0019 mg/kg (in blank)
  - Trichlorofluoromethane - 0.0023mg/kg
    - Potential Lab Error
- Metals
  - Generally Below Background

# Farmers Branch Creek

- Volatiles -
  - Not Detected
- Semivolatiles -
  - Bis(2-ethylhexyl)phthalate Only

# Reporting

- Letter Report
  - Summarize Results in Draft Report
  - Identify Reason for Resampling (i.e., ITS data)
  - Summarize Resampling Results
  - No Further Action Conclusion



# Offsite Weapons Storage Area (WSA) Status

Presented By

Bob Duffner

The Environmental Company, Inc.

February 11, 1999

## Recent Actions

- Completed Extent Characterization
  - Drainage Way 3 →
  - Bunker Drains

449 111

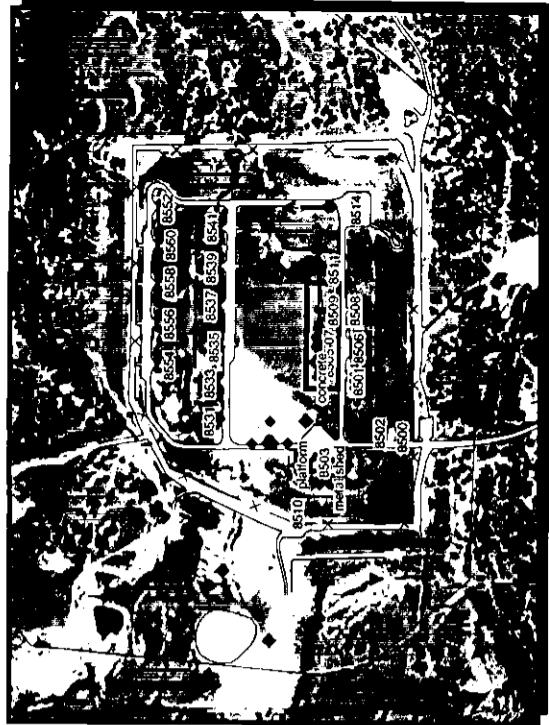
# Aerial Photo Overlay

## Drainage Way 3 Extent

- Primary Source
  - Power Station Floor Drain
- Secondary Source
  - Potential Service Vehicle Road

# Drainage Way 3 Extent

- Original Samples
  - 3 Surface Samples in Ditch
- Extent Samples
  - In Ditch
    - 12 Surface Samples
    - 9 Subsurface Samples
  - Outside of Ditch
    - 23 Surface Samples
    - 13 Subsurface Samples



### PAH Concentration Relative to Cleanup Levels (CUL)

- Not detected
- Detected at concentration less than CUL
- Detected at concentration less than 10 times CUL
- Detected at concentration greater than 100 times CUL

Outer color  
Indicates Surface

### Surface and Subsurface Soil PAH Levels in Drainageway 3

NORTH

Approximate Scale 1 inch = 63 feet

Date: February 1999  
Project Manager: B. Duffner  
Prepared By: D. Bedarf  
Project No: P-3109

The  
Environmental  
Company, Inc.

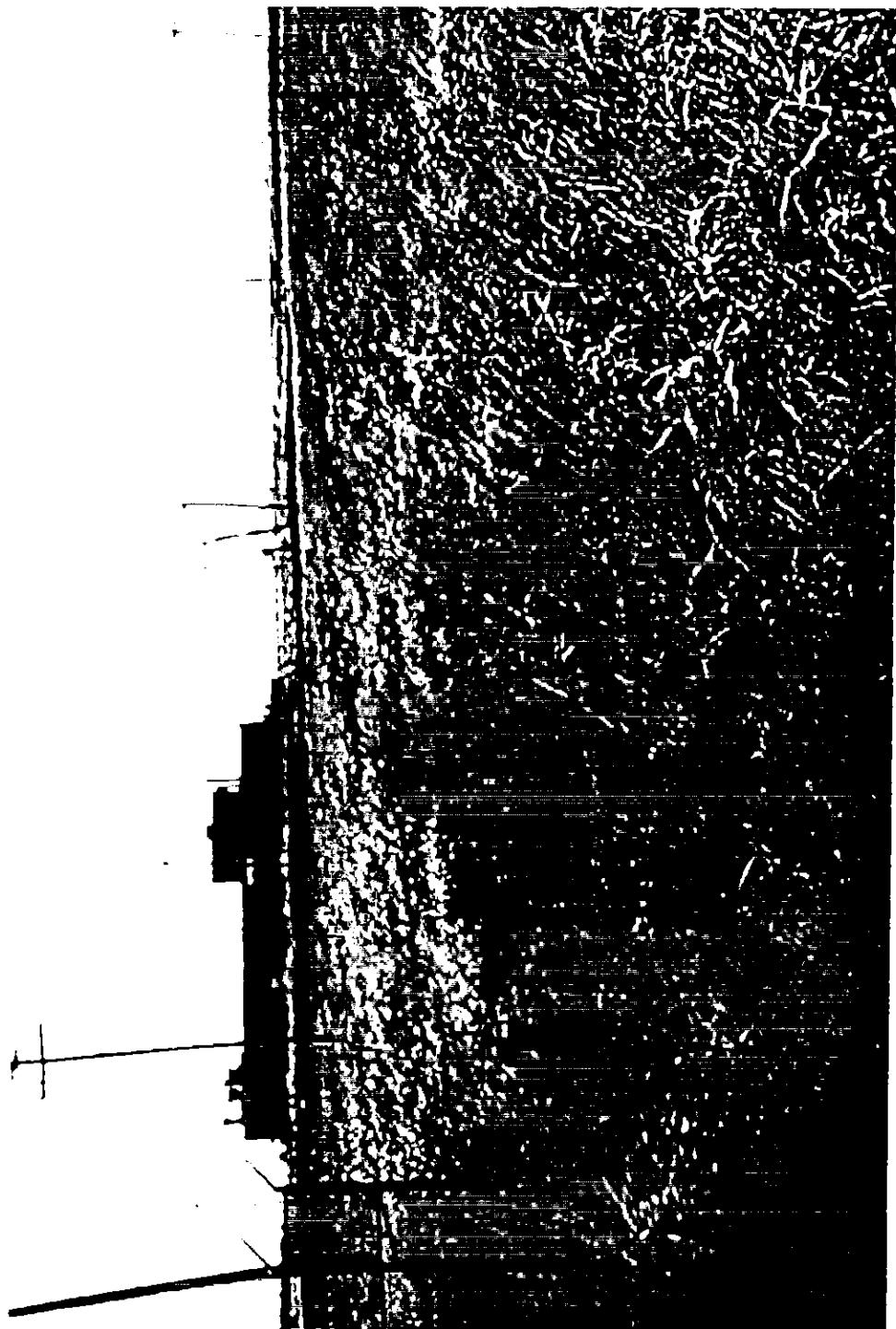
449 115

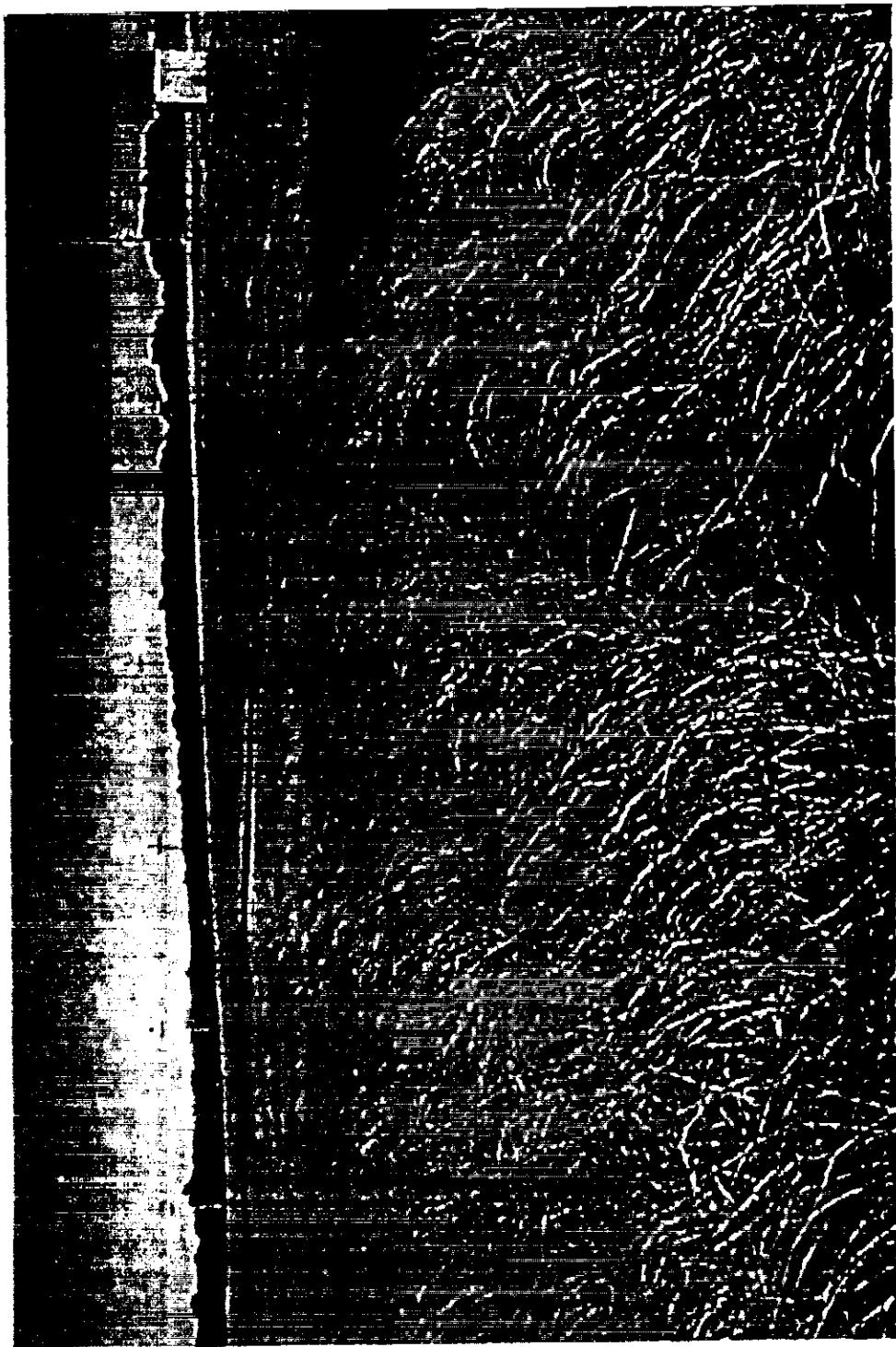


5-29-84

449 116

ROADWAY NORTH OF DRAINAGEWAY 3, FACING WEST TOWARDS BUILDING 8503, BEHIND BUILDING 8505.

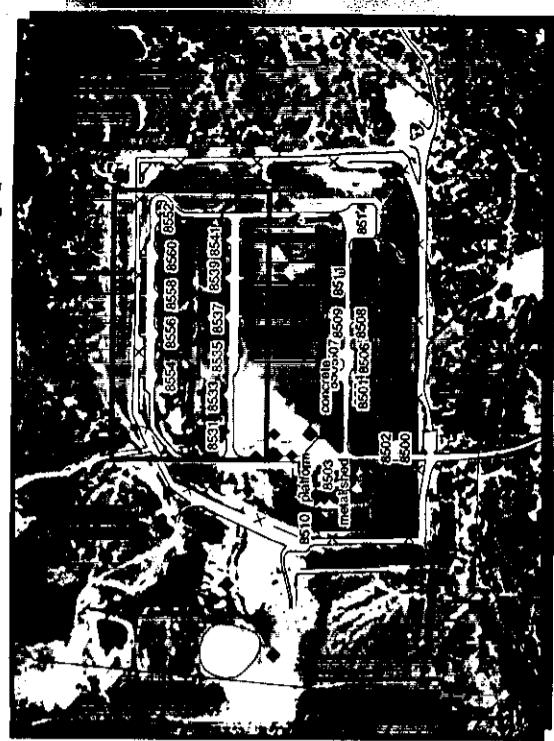




ROADWAY NORTH OF DRAINAGEWAY 3, FACING EAST, BEHIND BUILDING 8505.

# Bunker Drain

- Bunker Drains (11 bunker, 22 drains)
- Original Samples
  - 22 Surface, 30 Subsurface Samples
- Extent Characterization
  - 50 surface samples



### Metal Concentration Relative to Background UTL 95.5

- Detected at concentration less than background
- Detected at concentration less than 2 times background
- Detected at concentration greater than 10 times background

Note: BD-005, 130, 137 & 138 are the only locations with concentrations above cleanup levels

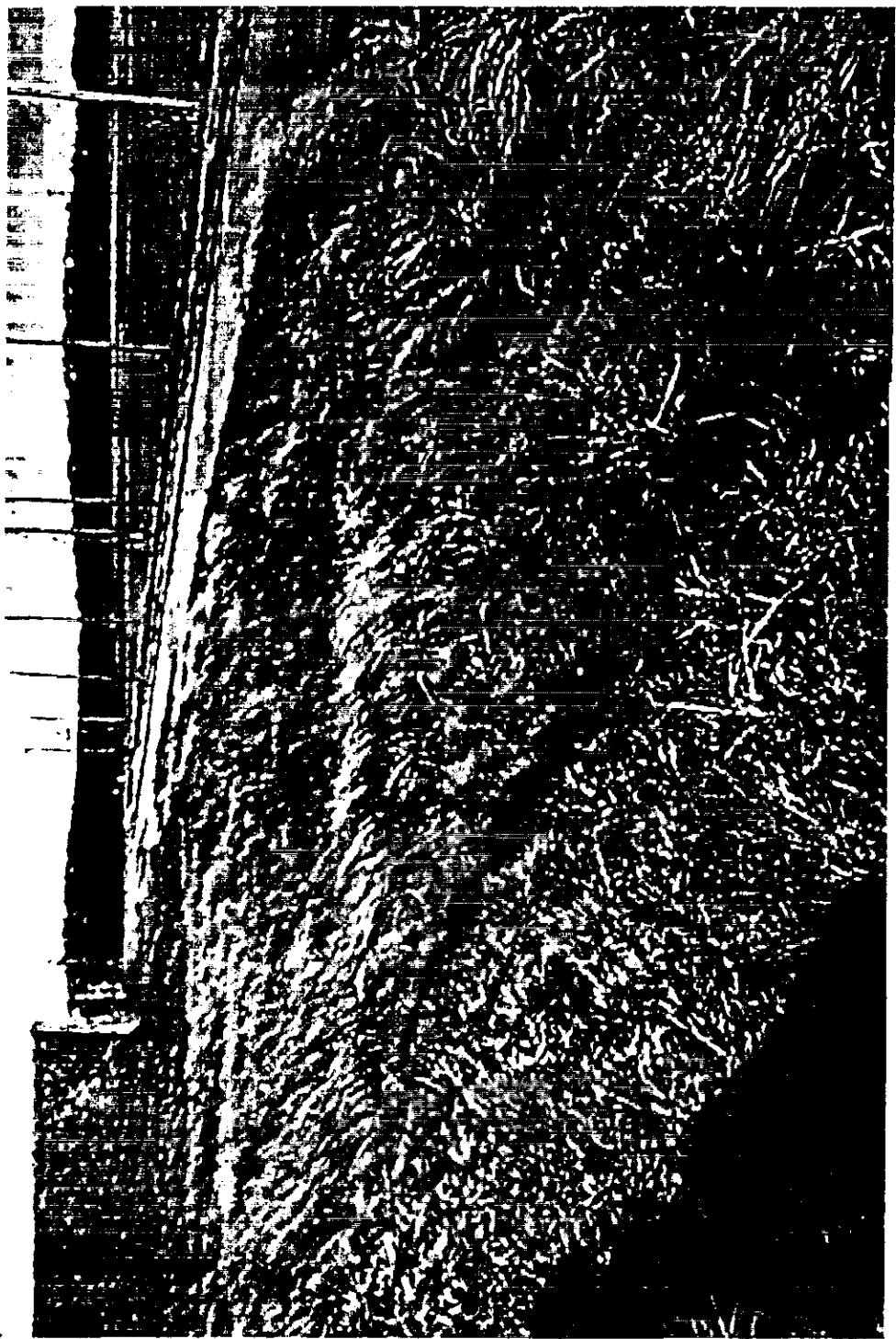
Inner color indicates Surface Middle color indicates Upper Subsurface (0.5-2.5 ft. bgs)  
Outer color indicates Lower Subsurface (>2.5 ft. bgs)

## Surface Soil Metals Levels in Vicinity of Bunker Drains

Date: February 1999  
Project Manager: B. Duffner  
Prepared By: D. Bedard  
Project No: P-3109

The Environmental Company, Inc.

NORTH  
Approximate Scale 1 Inch = 120 feet



TYPICAL NEW SAMPLE LOCATIONS EAST OF BUNKER 8537.

# USTs

- Error in Draft Document Identified
- Three of Five tanks not covered by PSTD
- Heating Oil Tanks
  - Benzo(a)anthracene ranges from ND to 1.1 ug/L in subsurface
  - RRSN2 CUL=0.012ug/l

# Proposed Actions

- Drainage Way 3 - Limit Excavation to  
Drainage Way
- Bunker Drains -Limit Excavation to 10 ft  
Radius of Drain
- UST Heating Oil - Limited Excavation to  
Below CUL or Backgound if Possible

## Other Actions Previously Discussed

- Area A3 Mercury Hot Spot Removal
- Remove Drain Field

**FINAL PAGE**

**ADMINISTRATIVE RECORD**

**FINAL PAGE**